240-MM. HOWITZER
Photo by U. S. Army Signal Corps

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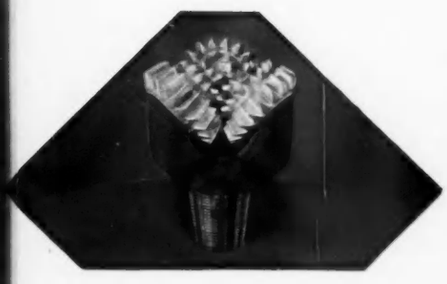

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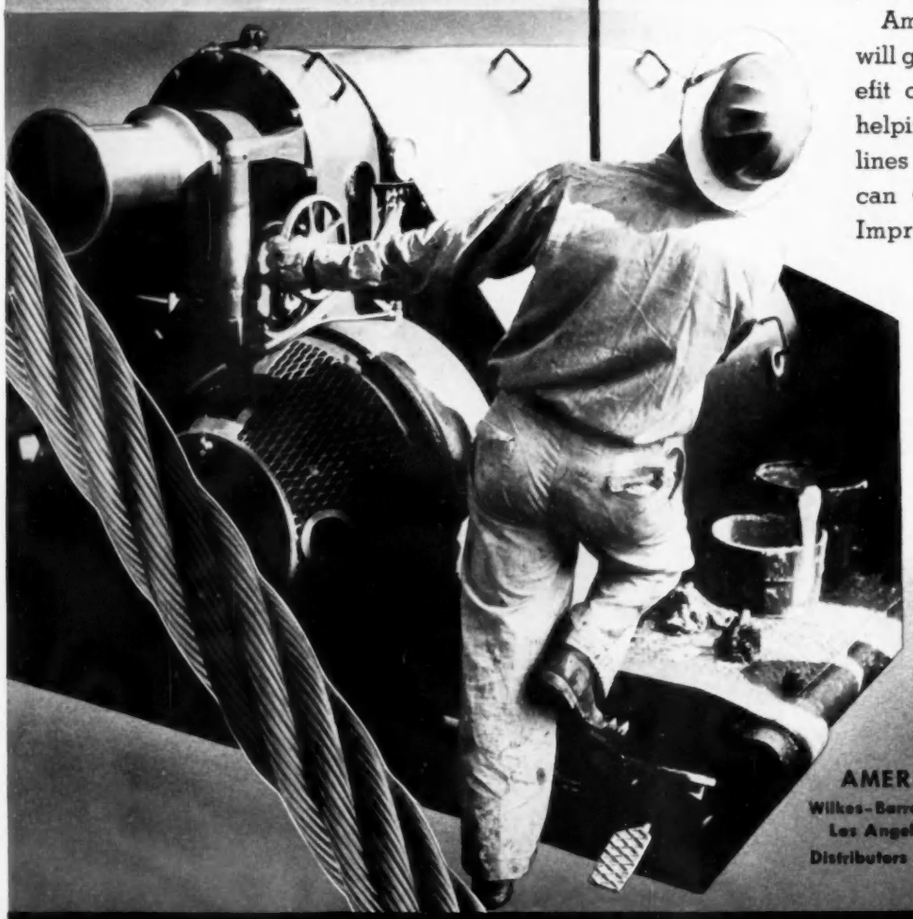

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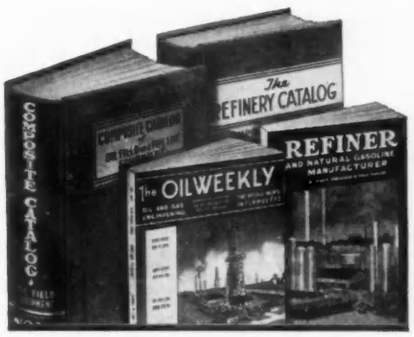


SPECIALIZED OIL JOURNALS
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## The Oil Man's Calendar

| | |
|---|---|
| JUNE 8–11 | American Society of Mechanical Engineers, Semi-Annual Meeting, Cleveland. |
| 22–26 | American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City. |
| SEPT. 7–11 | American Chemical Society, Buffalo, New York. |
| OCT. 5– 9 | National Safety Congress and Exposition, Chicago. |
| 8–10 | Texas Mid-Continent Oil and Gas Association, Dallas, Texas. |
| 12–14 | American Society of Mechanical Engineers, Fall Meeting, Rochester, New York. |
| 25–29 | National Lubricating Grease Institute, New Orleans. |
| NOV. 9–13 | American Petroleum Institute, Stevens Hotel, Chicago. |
| 16–18 | American Institute of Chemical Engineers, Netherlands Plaza Hotel, Cincinnati. |
| 17–21 | National Chemical Exposition and Industrial Conference, American Chemical Society, Stevens Hotel, Chicago. |

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# The Changing Panorama

## District 3 "Plan" Materializes

WATCH for complete readjustment of refining, transportation and production operations, especially in District 3 territory, now that civilian consumption is due to slump further because of gasoline rationing and tire conservation views. A comprehensive, controlled cooperative operating program which will see production, refining and transportation facilities regulated to take care of war product needs first is developing. It will closely follow plans proposed recently by the OPC General Committee for District 3 (THE OIL WEEKLY, April 27, 1942). Several parts of the program are being put into effect now.

OPC will certify not only state production, but also quantities of special crudes required by refineries in various districts to make war products. Into consideration would be taken production abilities, refining facilities and transportation outlet capacities. Thus fields producing types of crudes desired for war products will get first call in allocating of allowables. OPC committees will handle most of this work. About all that would remain for state conservation agencies to do would be to limit over-all state output to OPC recommendations, and to allocate whatever demand remains after war products are taken care of to other fields in the state.

By furnishing to refineries crudes more suitable for making war products, minimum crude runs would be possible, and the percent of refining capacity operated would be determined as much as economically possible by its supply, facilities and outlets. Refineries equipped to process war products would be first on the list.

To improve transportation efficiencies and provide additional facilities for moving petroleum to the East Coast, cross-hauling of products will be eliminated. Each refinery has been assigned a local marketing zone in which it will supply any filling station regardless of ownership. Shipments into other zones will be prohibited as much as possible.

To provide an incentive for refiners to adjust their yields to the manufacture of more fuel oil and less gasoline, which some of those not equipped for special war products will specialize on, do not be surprised if OPA grants higher price ceilings for fuel oil, and makes a proportionate reduction in gasoline prices to keep over-all prices at present levels.

## Duplications Adding Unnecessary Burdens

BESIDES the heavy time-consuming burdens of wrestling with such tough problems as the industry's transportation, priority applications, of operating with reduced trained personnel and smaller margins, as well as serving on numerous committees of OPC, PIWC and other government agencies, the executives, purchasing agents and engineers of oil companies are being burdened with a multiplicity of directive letters and questionnaires, all demanding and requesting reports and information, often involving a duplication of data. This situation is taxing the industry's personnel to the point that its ability to carry on essential activities is endangered.

Much of this information is vital to the war or industrial effort, but duplication and needless reports should be eliminated. The recommendation of PIWC that OPC act as a central clearing agency for all government groups is a sound suggestion that should be adopted.

## Industry's Key Men Get Draft Deferment

THE Selective Service headquarters is considering issuance of an occupational bulletin covering the oil industry, which would list critical occupations necessary to the successful operation of the business, and which it is felt would be of some assistance to local draft boards in placing registrants in their proper classifications.

Meanwhile, a representative of Selective Service has written the American Association of Oilwell Drilling Contractors: "It is felt, with available information presented to the local board by the registrant and his employer, a key man employed by any of the oil well drilling firms of your state will be given every consideration by his local board; and if the local board fails to place the registrant in Class II-A as a 'necessary man,' he has the right to appeal from the classification given him by his local board. Also the employer has the right to appeal, on behalf of his employe, from the classification given by the local board. In this way, it is hoped that any business or industry that is essential to the war effort will be given protection for its key employes. However, there is an obligation upon the part of the employer to place in training such men as he deems necessary to replace the present key employes who have been granted a deferment for a period not to exceed six months at any one time."

## Socony Report Shows Transport Cost

SOCONY-VACUUM Oil Company asks for compensation for heavy war-time costs of operation by government reimbursements and raising of price ceilings, and cites its own experience as showing the need for the relief.

"It is our opinion," John A. Brown, president, told stockholders, "that the government should currently provide for cash reimbursement of such special programs as the railway tank car movement, undertaken at government request, and that price ceiling changes should afford an opportunity to recover other higher unit costs, resulting from such things as rationing."

Earnings of the company have been declining sharply from January through May, he stated, and "in April this year, the domestic earnings before taxes were approximately half what they were a year ago and about half of the earnings for March of this year . . . This sharp decline . . . results in large degree from the fact that in April this year the sum of unrecovered excess overland transportation, excess marine transportation and

excess product cost, all incurred by this company as a result of operating as desired by the government, amounted to about $2,300,000. . . . The movement of products East at high cost must go on, and must be increased, if possible, but surely no one will disagree with our opinion that this service cannot be carried on at such heavy loss by industry."

## War Boosting Liquefied Gas

A BRANCH of the petroleum industry which has assumed increasing importance in recent years currently is going ahead remarkably in spite of the war—or because of it. It is the liquefied petroleum gas branch.

The liquefied gases are sold for cooking, water heating, lighting, and other domestic purposes. Systems employing these gases have been installed in many defense housing projects, Army cantonments, and other government establishments.

*There is a bit of irony in the present activities of Simon Lake, the submarine inventor. At Pottstown, Pennsylvania, Lake has disclosed that he is working on the development of a new type of concrete pipe, capable of withstanding high internal pressure, for use in construction of pipe lines. His pipe, details of which are not disclosed, is receiving engineering tests. He hopes to develop concrete pipe lines to carry oil to the East Coast, to relieve situation caused by enemy submarine campaigns against tankers.*

## Dry-Hole Percentage Showing Increase

THE industry is showing an increase in percent of dry holes drilled under M-68 regulations. Except Michigan, all leading states during the first four months of 1942 have shown a greater percentage of dry holes than during the corresponding period of 1941.

The increase is partly due to the fact that 1 percent more of the wells drilled have been wildcats, and that the percentage of wildcat failures has risen 2 percent. However, it probably partly is due to the use of 40-acre spacing having resulted in more dry holes as production limits are over-stepped more frequently.

The following table compares dry hole results in the first four months of 1942 with the same period of time in 1941:

| | 1942 | | 1941 | |
|---|---|---|---|---|
| | Total Completions | Percent of Dry Holes | Total Completions | Percent of Dry Holes |
| California | 264 | 33.0 | 350 | 18.9 |
| Illinois | 541 | 38.6 | 1009 | 24.0 |
| Kansas | 494 | 34.0 | 624 | 24.0 |
| Louisiana | 346 | 33.2 | 421 | 26.8 |
| Michigan | 217 | 34.1 | 257 | 52.5 |
| Oklahoma | 527 | 35.8 | 613 | 29.2 |
| Texas | 2323 | 27.1 | 2919 | 26.2 |
| Others | 2747 | 13.5 | 2562 | 12.6 |
| Nation | 7459 | 24.7 | 8755 | 22.5 |

## Aluminum Production Increases Fuel Demand

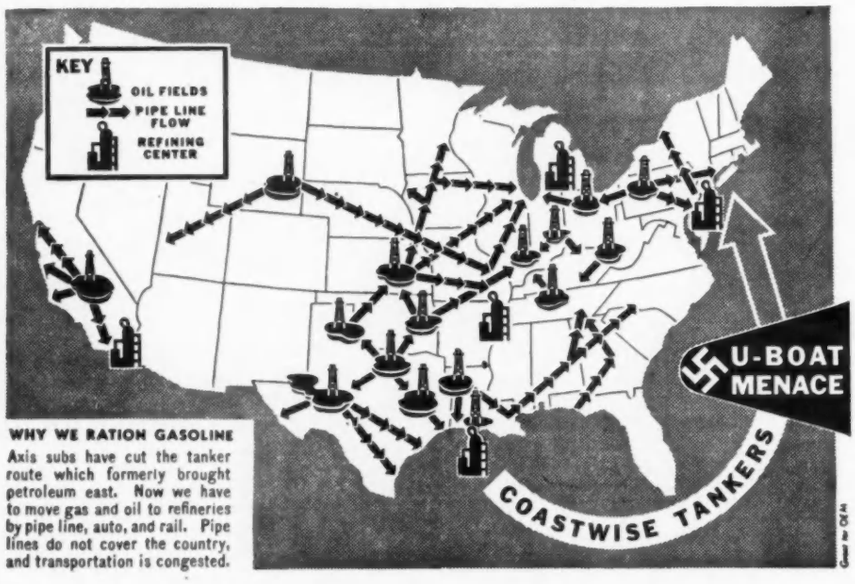
BY THE end of 1943, the United States production of aluminum will be approximately 2,100,000,000 pounds annually. This is 6½ times 1939 production — enough to rebuild every railroad passenger car in the United States three times a year. But there still will not be a pound available for civilian use.

To produce this quantity of aluminum will require more electricity than was consumed in 1940 in 27 of the 48 states, in which year 16,326,000 barrels of fuel oil and approximately 200,000,000 cubic feet of natural gas were used in generation of electric power. One new aluminum powerhouse has 60 gas engines each driving a 750 killowatt generator and 18 equipped with 2250 killowatt generators.

## Keeping the Record Straight

THE OIL WEEKLY is in receipt of a copy of a resolution passed by the board of directors of the Dallas Automotive Trades Association correcting reports to the effect that Senator W. Lee O'Daniel, in an address before the association, declared that 14 synthetic rubber plants with a capacity of 50,000 tons per factory per year will be built in Texas. The resolution states that Senator O'Daniel did not make any such statement but did say that he hoped that Texas would get its share of these plants.

*When Preference Rating Order P-98 expires July 1, the industry probably will be placed on a Production Requirement Plan. Most other businesses already have been changed from preference rating status in obtaining steel supplies to the PRP or Allocation system, and its application to petroleum has been expected. briefly, PRP provides for the allocation of a definite and limited amount of steel to an industry. Oil has had sufficient trouble under the preference rating plan in procuring enough steel, but under PRP it likely would be curtailed further.*




**WHY WE RATION GASOLINE**
Axis subs have cut the tanker route which formerly brought petroleum east. Now we have to move gas and oil to refineries by pipe line, auto, and rail. Pipe lines do not cover the country, and transportation is congested.

**The above map is being distributed by OPA as an explanation of the why of gasoline rationing in the East. The map was originally drawn for the use of the Office of Emergency Management.**

# A Word of Warning

By RAY L. DUDLEY, Publisher

THESE following words are written through the sincere wish to offer a constructive suggestion. They are written with the full knowledge that he who speaks counter to the offering of some of our governmental bureaus may be branded a "sixth columnist," but they are written in the knowledge that such accusation does not make the charge true—that when sincere Americans may no longer express an opinion or offer a suggestion, Democracy is dead. Democracy is *not* dead and the man who operates under the theory that true patriotism requires servile obeisance to false theories just because they are handed down from high places is a coward and untrue to the heritage of freedom left him by his forefathers.

One reason the public has objected so strenuously to gasoline rationing is that when gasoline rationing was proposed by Coordinator Ickes last summer a great many people felt that he was crying "wolf, wolf" when there was no wolf. Subsequent events indicated to the public that his rationing plan was ill-advised and unnecessary.

Whether or not it was unnecessary then (in the light of what has since happened it appears to have been a rather reasonable but poorly handled move) the public became sold on the thought that it was duped by a governmental agency. Consequently, the public complains bitterly when the matter is taken up again and imposed under the unpopular sponsorship of Leon Henderson.

In the mind of the public there is a very serious doubt as to whether or not sugar rationing is necessary. One hears stories of bulging sugar warehouses. One hears stories of the government paying raisers of sugar beets and sugar cane not to raise the products from which sugar is made. Insignificant though it may be, government regulations of clothes have approached the state of a farce. In the minds of many there is a suspicion that a group of half-baked theorists are having a Roman holiday with the daily life of the American people under the guise of impressing on us that we are at war.

*It is our firm belief that the American people will make any sacrifice necessary to win this war and if they believe that the sacrifice is necessary they will make it without murmur.*

But confidence in the judgment of those who direct things is a necessary factor in selling the public that a given emergency actually exists. Once the public gets confirmation of its suspicions that some of these regulations are not necessary but have as their bases either very poor judgment or simply the desire to impress the people with the fact that we are at war, a very bad situation arises.

*We are not optimistic enough to believe that we can win this war without genuine sacrifices. Those sacrifices likely will be greater than anything we have encountered to date and will make sugar and gasoline rationing pale into insignificance.*

Those who are in power at Washington should remember that when the time for a real sacrifice comes it is highly important that the people accept the word of the government without quibbling and make the sacrifices whole-heartedly—and *the government should remember that if it plays up false conditions of sacrifice, when no real emergency exists, it will have nobody to thank but itself if the people fail to recognize the real emergency.*

# The Wonder Grows

DAY by day the wonder grows on the part of the average citizen that the government has not started a nation-wide whirlwind campaign to pick up used rubber for reclaiming.

The capacity of rubber reclaiming plants in the United States is 350,000 tons per year, John L. Collyer, president of The B. F. Goodrich Company of Akron, declared before a Senate investigating committee, "if the rubber comes in."

And he added the startling fact that rubber reclaiming plants of the country were operating at only 50 percent capacity during the first three months of this year.

He, an authority on rubber, pleaded for a campaign to bring in scrap rubber.

We doubt if anybody knows how much used but not useless rubber is to be found in the garages, on the farms and in the homes of America. It may be that the estimate made by Joseph Pogue, vice president and economist of Chase National Bank, several months ago, of 1,000,000 tons is well within reason. Readers of THE OIL WEEKLY will recall an article by Dr. Pogue and Mr. N. D. Fitzgerald suggesting a nation-wide drive to bring in used rubber.

Of course we all know that there has been no such drive, although various individuals on the radio conduct sporadic crusades to get in the used rubber.

Mr. Collyer says that we need a campaign to bring in scrap. Men with whom we talk have told us that there are heavy stocks in the hands of junk dealers who want more money for it than the present price. Others tell us that the railroads discourage rubber shipments from the Southwest to reclaiming plants because "rubber is piling up and other shipments rightfully should have priority over rubber." One hears just about everything but the good news that the rubber-reclaiming plants of the country are operating at capacity with additional capacity being built.

If the rubber situation is as serious as the government indicates, and we believe that it is serious enough to warrant every addition to output which common sense can dictate, the government should get busy and sponsor a well-planned campaign to bring in the rubber scrap. Let us have no more ill-conceived jobs such as the aluminum campaign, but one based on common sense and an appreciation of the practical job to be done.

# ☆ ☆ ☆ ☆ WASHINGTON ROUNDUP ☆ ☆ ☆ ☆

By B. F. LINZ
Washington Correspondent

CRITICISM of the negative approach of war agencies to the gasoline and rubber problems rose to a new high during the week, with increasing indications that unless the administration's attitude changed Congress might step into the picture in an effort to put halters on Donald M. Nelson and Leon Henderson.

The heat generated by gasoline rationing spread from the capitol toward the other end of the city, and was felt at both WPB and OPA where top officials soon may be asked to explain their "do nothing" attitude toward civilian supply.

Criticism largely was based at the apparent determination of the war agencies to do nothing toward developing a new supply of tires for civilian cars and resting on efforts to string present supplies out, a negative attitude which clearly has irked members of Congress who shortly must return to their districts and make explanations to their constituents before asking them to vote them back into office.

### Prospects Improve

While nothing concrete transpired during the week, the Washington underground hummed with reports on this and that, including one that the application for steel for the "big-inch" pipe line, and particularly for its first section toward the north, was in better position than ever before and that there was more than a bare possibility that the project would receive WPB approval.

Even if only the first section of the line was laid, to Salem, Ill., it would prove a great advantage to the oil-thirsty East, it was said, and would materially strengthen the seaboard's position.

The PIWC meeting was the highlight of the week, with the industry's leaders demanding a showdown on rationing, acting on prices, and a stepping up of deliveries to the East Coast to avert what may become an actual oil famine next winter.

**Congress Getting "Fighting Mad" Over Rationing**

**PIWC Looks at Situation and Issues 10-point Program**

**Hope for Increased Crude Price Fading**

☆ ☆ ☆ ☆

There were budding activities in other Washington areas, too—at the capitol, where Senator Tom Connally of Texas proposed the creation of a $500,000,000 oil corporation to deal with the financial problems involved in war oil production and Representative Dingell of Michigan sought a House investigation of the whole oil-rubber supply situation; at the War Production Board, where Director Donald M. Nelson set up a special committee to study the "big-inch" pipe line application, and at the Office of Price Administration where a new rationing system for the East, which may become the basis for handling nationwide rationing, was outlined.

Also, at the capitol, the House refused to pass the Mansfield bill for a $144,000,000 inland waterway and Florida pipe line development, under a suspension of the rules which would have prohibited amendment of the measure. Whether the Texas congressman will make a further effort to secure approval has not been decided, but toward the end of the week he indicated he would.

Of definite interest to the industry was an explanation by the Materials Division of OPC, based on the views of the WPB, regarding critical materials and their position with respect to new oil facility construction.

☆

**RATIONING:** Firm in the face of intimated threats that Congress might thwart its program, the war administration last week moved further toward nation-wide gasoline rationing, to be based on a new system to be introduced in the East next month under which the scandal-creating "X" cards will be eliminated.

### New System

Under the new system, every passenger car owner will be given only "A" books containing 48 coupons which are to last for one year. Additional rations will be provided in "B" and "C" books, for which car owners will be required to go to their ration boards.

An innovation will be the requirements that gasoline dealers, like grocers, will have to detach coupons when making sales and turn them in to replenish their own supplies, providing an audit control of every gallon of gasoline distributed.

The introduction of this system is due to the discovery that a number of East Coast filling stations have violated the rationing regulations by delivering more gasoline than called for by ration cards or making sales without destroying coupons.

On the basis of extension of rationing to the entire country, newspapers in the East foresaw the possibility that the basic ration would be increased from the present three to four gallons a coupon in the coastal areas, but informed officials pointed out that national rationing would not serve to increase the East's supply to a point where the allowable could be raised.

The political issue which gasoline rationing has become reached the boiling point toward the end of the week, with a conference at the White House Friday between President Roosevelt and heads of

a dozen federal agencies. The conference followed the adoption of a resolution of opposition to nation-wide rationing by a bloc of 100 congressmen who plan to meet with similarly-minded senators to work out the strategy of a campaign.

At the meeting at which the bloc was organized, criticism was outspoken and in strong terms, in which "bureaucratic methods" and "dictatorial policies" were among the milder.

### Congressmen Mad

There was no doubt that the Congressmen were fighting mad, Representative Johnson of Oklahoma asserting that he was "fed up" with Henderson presenting himself as an expert on all subjects, while another representative said OPA is "building up a gestapo" to enforce its orders. Members from the score of producing states declared themselves ready for a finish fight on the issue, predicting that the public outside the shortage area never would stand for gasoline rationing as a rubber saver. Members from other states were said to be ready to join in the fight, and there was little doubt that if the administration persists in its plan a ready-made major political issue will be precipitated.

Meanwhile, OPA proceeded with its oil program, issuing orders giving rationing boards specific authority to call in holders of ration cards for personal questioning to determine whether they were obtained by mistake or fraud, as the Washington board disclosed it already had revoked large numbers of "X" cards under threat of prosecution if holders failed to submit to examination.

OPA also specified that motorists applying for supplemental rations under the permanent plan which is to go into effect next month will be required to prove that they are members of car sharing or pooling groups, or very definitely demonstrate that his need for gasoline is real and that the circumstances of his work prevent pooling.

Surveys by the Federal Works Agency disclosed June 6 that highway traffic in the Atlantic states has declined sharply since rationing was introduced. Reports from several states indicated that traffic on rural roads had dropped 35 to 45 percent from the corresponding period a year ago. However, it was said, motor-fuel tax receipts in 29 states in April indicate that gasoline consumption was still about 95 percent of last year which means, officials explained, that while rural travel is declining, urban traffic had increased.

**PIWC MEETING:** Denouncing the nation-wide rationing of gasoline as a rubber-saving measure, the Petroleum Industry War Council last week demanded that more adequate information regarding the rubber situation be given the industry and the public before such a step was taken. At the same time, the council, adopting a report of the committee on petroleum economics, called for a further reduction of East Coast consumption until it can be demonstrated that a steady supply of oil in excess of the deliveries which it estimated can be made, can be maintained, and urged the convoy-guarded movement of tankers to increase the flow. Third major subject of discussion at the council's three-day June meeting was prices, on which George W. Stocking, director of the fuel division of OPA, conferred with the group for some two and one-half hours. The situation outlined by Stocking in the course of the session was said to have been "promising," but it was indicated that nothing definite had been offered. In a resolution adopted by PIWC, the rationing of gasoline as a means of securing rubber conservation was strongly opposed, as was rationing on any pretext pending a definite showing that it was needed nationally.

### Seek "Adequate Information"

The council's action was taken in the face of information from WPB that a new system for rationing gasoline in the East would be put into effect by July 1 and probably would be made national in scope. The three-day session of the council went deeply into the rationing problem, adopting a resolution opposing nation-wide rationing of motor fuel as a rubber-saving measure now or until the industry and the country are given more adequate information.

"The forecast of essential demand is that estimated as the minimum required for effectively conducting the war effort," the committee explained. "The actual demand will be controlled by available supplies and may exceed or fall short of the estimated essential demand indicated. It will be noted that the anticipated non-tanker receipts can supply the essential demands during the summer, but would be entirely inadequate to take care of the sharply increased winter requirements. If actual demand were reduced to the estimated essential demand, the average shortage of 115,000 barrels daily for the entire period presumably will have to be met by other means, preferably by protected tanker movements.

### Needs on East Coast

"This shortage of 115,000 barrels daily is against essential demand only and makes no allowance for demand in the intermediate category of approximately 169,000 barrels daily, which could only be eliminated at severe consumer hardship. It also assumes that East Coast stocks, as of April 1 next year, will be no higher than present depleted levels. Additional deliveries of 63,000 barrels per day would be required over the period to raise these stocks to levels comparable to those existing as of April 1, 1941. Therefore, if real consumer hardship is to be avoided and stocks brought back to a reasonably safe level, 347,000 barrels daily will have to be brought into District 1 by protected tankers or new pipe lines, although the latter could not give relief this year."

Since the estimate of essential requirements of gasoline has practically no seasonal variation, it was pointed out, the winter seasonal increase in the total demand on an essential basis is accounted for entirely by the increased requirement of fuel oil, particularly for heating during the winter. Since transportation will not be released from gasoline, it has been normal during the winter months, a much greater portion of next winter's demand for fuel oil must be met from prior accumulations on the East Coast than heretofore.

"A preliminary analysis of the results of the present card rationing system indicates that the reduced gasoline consumption resulting in District 1 will still be greater by some 70,000 barrels daily than the minimum essential demands estimated," the report commented. "This is partly because the area of rationing does

not include important parts of District 1. The essential demands estimated for fuel oils assume substantial reductions in use due to improved efficiency, lower household temperatures, and conversions to coal. To the extent that restrictive measures in consumption of gasoline or conversions of fuel oil installations to coal do not reduce consumption to the estimated essential demands, the shortages against non-tanker supplies will be greater than those indicated."

### Larger Shipments

It was explained that the estimated supplies by non-tanker facilities reported are greater than those previously forecast, as a result of the receipt of later information from various industry committees. Tank car movements are estimated to increase to 800,000 barrels daily and then decline somewhat during the winter months as a result of reduced transportation efficiency under unfavorable weather conditions. The latest information on barge movement, particularly on the Great Lakes and the Mississippi and Ohio rivers, has had the effect of substantially increasing former estimates. No major pipe lines requiring new steel have been included in the forecast, but consideration has been given to the probable effect of assured projects using second hand pipe.

"During the winter" the committee continued, "inventories on the Atlantic seaboard usually reach their low point about the end of March, and thereafter rise seasonally. This year a continued decline has occurred up to the present in inventories of total crude and products. Since inventory accumulations during the low consuming period of the spring and summer have not yet begun, it is apparent that this stock trend must be reversed as soon as possible, as the longer such reversal is delayed, the more difficult it will be to attain adequate stock levels.

"The non-essential uses of gasoline on the Atlantic seaboard are proportionately greater than those for fuel oils. Since these non-essential uses have been entirely eliminated in the foregoing forecast, it follows that this area will need more fuel oils in relation to gasoline than it has in the past. These products must be made available from refineries in Districts 1, 2 and 3, approximately in the proportions of essential demand in District 1. This will require refineries in these areas to further change their operations as soon as possible to produce substantially larger quantities of distillates as well as residual fuel oils, and less gasoline, in order that the necessary stocks may be built up this summer. These products should be transported into the East Coast area in these proportions during the entire period, otherwise, the accumulations of heating fuel oils that should take place for next winter's demand will not be accomplished."

### Ten-Point Program

In the light of the shortages indicated and the necessity for accumulating stocks during the summer, the committee laid down the following ten-point program:

1. Total consumption in District 1 should be reduced to the approximate daily average essential requirements indicated in the forecast until it can be clearly demonstrated that supplies will exceed that amount consistently.

2. The studies being undertaken looking towards the conversion of all types of burners using fuel oil and kerosene should be concluded at the earliest possible date. Steps should also be taken to assure that these conversions will be made to the extent practicable before the coming winter. Further publicity should be given by both public and industry sources to the necessity for these conversions and the reasons for restricting consumption through economies in order to save petroleum products during this period of transportation shortage.

3. Supplies should be made available so far as possible in the areas nearer to the East Coast so that transportation facilities may be most effectively used. The most obvious sources of such supplies is the western portion of District 1, which should definitely be included in the rationed area. Also, to the extent that supplies of products can be made available in the northeastern part of District 2, tank cars would have about double their capacity for delivery into District 1 compared with movements from Texas, Oklahoma and Kansas. However, the higher costs of products in these areas must be recognized, and proper provisions made for recovery of the higher costs involved.

4. In order that the maximum number of tank cars may be released for and kept in long distance movements, it is essential that the tank trucks which are doing the local work of these tank cars be kept in operation, and that assurance be given that the relatively small amount of new rubber required be made available.

5. Deliveries above current essential requirements should be added to inventories to bring present depleted stocks to necessary levels in anticipation of winter demand for fuel oils.

6. Refineries supplying District 1 should further change their operations as soon as possible to provide additional supplies of distillate fuel oil as well as residual fuels. However, to go further in this direction under present price ceilings (inherited from a period when gasoline was the prime refiner product) would speedily bankrupt some of the refineries affected, so means must be found to correct the situation promptly before more drastic changes in yields can be expected.

7. It should be pointed out that available transportation facilities are inadequate to move crude or products from District 3 at rates higher than the levels of production recommended by OPC, and that allowables higher than those will necessarily result in maladjustments in the industry and pipe line proration by individual companies.

8. Such tanker capacity as may be available should be largely utilized to make deliveries to New England points in order to permit the most effective use of tank cars on shorter hauls and avoid bottlenecks at New England railway gateways.

9. Since residual fuel oil stocks on the East Coast have reversed their downward trend while gasoline and distillate fuel stocks are still going down, it is important that current and future directive orders be modified so as to produce a balance stock position of all products based on a consideration of future demand.

10. Non-tanker methods of delivery should be still further increased. However, the industry cannot be expected to continue, let alone expand, its heavy out-of-pocket contributions to war service when present price ceilings prevent cost recovery on any of the products it is bringing into the coastal area. Either the govern-

ment or the public must take care of the excessive wartime transportation costs if such methods are to be fully utilized.

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**INVESTIGATION:** Investigation of the whole question of petroleum supply by a five-man House committee is proposed in a resolution introduced by Representative John D. Dingell of Michigan.

The investigation would cover "the entire problem with respect to shortages and rationing of gasoline, fuel oil and other petroleum products in the various states. With particular reference to the methods which are being employed in the distribution and deliveries of such products, in order to determine the most effective means which may be adopted to insure an adequate supply of such products for national defense purposes, without undue hardship to business enterprises and the civilian population; and the entire problem with respect to the natural-rubber shortage and the causes or reasons for the failure to produce an adequate supply of synthetic rubber for national defense purposes and for civilian uses."

In the Senate, a bill introduced by Senator Ellender of Louisiana for himself and six other senators on the special committee to study problems of small business, called for the earmarking of 3500 tons of crude and 90,000 tons of reclaimed rubber annually to provide 30,000,000 retread tires and the necessary tubes for civilian cars.

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**ICKES SAID:** Two projects for pipe lines across Florida are under consideration, but one, of 8- or 10-inch diameter, would be sufficient. Negotiations are under way with the owners of pipe lines in Texas to buy the line for digging up and relaying. The project will be undertaken as a private enterprise with financial assistance from the Reconstruction Finance Corporation.

No official notice has been received of Texas' refusal to accept OPC June production recommendation. "It is unfortunate that Texas insists on allowing more," Ickes said. "That doesn't conform to our estimate of what we feel they should allow, but we think it is a question of letting nature take its course. The questions of supply and demand and available storage will determine in the end whether they can bring in more than we said."

Tank car movement into the East Coast during the week ended June 2 dropped from 708,600 to 664,320 barrels per day, with about 54,000 cars involved. Rail deliveries to Oregon and Washington have dropped sharply as a result of increased tanker movement, only about 8000 to 9000 barrels daily being received. The excess cars are to be brought into the East Coast service as quickly as possible.

Some wooden barges are being built, but the controversy over their adaptability for oil continues unabated. However, they can be traded for steel barges now carrying dry cargoes; more steel barges will be needed when the proposed pipe lines get into Helena, Arkansas, and Paducah, Kentucky.

Difficulties are beginning to appear in the procurement of steel plate for aviation gasoline and butadiene plants, although deliveries have been keeping to schedule so far.

☆

**PIPE LINE MOVEMENT:** Close to 150,000 barrels of crude and products daily are believed to be coming into District 1 by pipe line at the moment.

Figures of the OPC pipe line committee show that for the week ended May 23, an average of 89,335 barrels of crude came in daily through the Buckeye and Illinois lines and 50,074 barrels of gasoline through the Plantation line.

The capacity of the last, however, was said since to have been stepped up to probably 58,000 barrels daily.

Pipe line receipts in the seaboard area have been steadily increasing over a period of several months. A year ago, it is estimated, an average of only 47,000 barrels a day was moving eastward by pipe line, and as late as last December the estimated movement was only 71,000 barrels.

The latest accurate figures available cover the week ended May 9, and show that 48,600 barrels of gasoline flowed through the Plantation line daily and 76,900 barrels of crude moved through the Buckeye and Illinois lines.

There is an additional 20,000 barrels of crude daily moving through the Susquehanna line, but as this goes only to the Pittsburgh area and is transported to destination by rail, it is not included in the pipe line figures.

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**"BIG-INCH" LINE:** WPB has set up an engineering committee to study the East Coast supply situation and the "big-inch" pipe line application, and it may be some days before anything definite develops. WPB on June 4 announced that the committee would be composed of Wayne Johnson, special adviser to Director Donald M. Nelson, chairman; Federal Loan Administrator Jesse H. Jones; Brigadier General W. B. Pyron, representing the War Department; Commander W. M. Callaghan, representing the Navy; Isador Lubin, representing Harry Hopkins; Charles Raynor, representing Vice President Wallace; A. R. Glancey, representing Lieutenant General Knudsen, and Glennon Gilbey, representing Price Administrator Henderson.

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**FLORIDA PIPE LINE:** The proposed Florida pipe line stranded last week on the shoals of the intracoastal canal when the House of Representatives, by decisive vote, refused to pass the Mansfield bill for a $144,000,000 barge canal and pipe line development from the Mexican border to New Jersey.

Several factors were responsible for the House action, but the primary ones were the effort to jam the bill through without debate or amendment by bringing it up under a suspension of the rules, and the heavy expenditure which would be necessary for the construction of the proposed canal through Texas to the Mexican border.

There were, however, a combination of other circumstances, all of which had an influence—a belief that the bill was merely a cloak for construction of the Florida ship canal; a widely held opinion that President Roosevelt could order the Florida pipe line built without any legislation, under the Cole Act giving pipe lines the right of con-

[*Continued on page 36*]

# Condensate Field Spurs Texas Wilcox Activity

By GORDON B. NICHOLSON, Staff Writer

HIDDEN in a heavily wooded part of southern Montgomery County, Upper Texas Gulf Coast, development of the Lake Creek field during the first 14 months following discovery has focused attention on the area as a major condensate reserve. Producing from several sands in the Wilcox formation, fluid content of the gas shows high saturation, with expectancy of prolific yield of valuable high-octane gasoline and allied products as the field expands. Already, plans are being made for construction of a large cycling plant to serve the field, and drilling is assuming a pattern to receive the greatest ultimate recovery and benefit from its operation.

The field holds the distinction of furnishing the deepest production ever obtained on the Texas Gulf Coast, with the recent completion of Superior Oil Company's South Texas Development Company 1 through perforations from 11,775 to 11,815 feet. It is believed that this well produces from the deepest of the Wilcox sands, and, as the formation is topped at about 8465 feet, it envelopes over 3300 feet of Wilcox which has potentiality of producing, and the bottom of the formation is still undetermined. A recent Lake Creek well was carried to a Texas Gulf Coast depth record of 13,330 feet, showing total penetrated thickness of nearly 5000 feet, and drilling was stopped while still in the Wilcox.

The Lake Creek field is located on a small stream of the same name, in rolling but generally low terrain which is often inundated when the creek rises following heavy rains. During these periods, access to the field is uncertain, but operators alleviate a difficult transportation condition by constructing many feet of board roads into the woods, leading to all wells and rigs. Hundreds of pines and other trees which grow profusely in the district are removed as roadways are cleared.

High condensate saturation of the gas produced from the three principal sands excites interest in possibilities of uncovering additional similar production from the Wilcox, and encourages further development along the trend which in recent years has undergone extensive exploration on a line running across South Louisiana, South and Southwest Texas to the Rio Grande River. Value of the high-gravity condensate is particularly important at present when high-octane gasolines, synthetic rubber, and explosives are being manufactured on a large scale, and governmental action further encourages discoveries of this type. Richness of gas in fluid content is an inducement to cycling, as large quantities of condensate are recoverable from small volumes of gas.

### History of Lake Creek

The structure was located by reflection seismograph, and is now defined as a gentle elongated anticline, probably caused by regional fault, and having a generally east-west axis. Its limits are undetermined, as development has been slow and orderly, mushrooming from the discovery well in all directions. Present producing area covers about 2000 acres. Discovery well was Superior Oil Company's T. A. McWhorter 1, completed on February 23, 1941, with an initial production of 170 barrels of 62.5-gravity distillate and 1,380,000 cubic feet of gas daily through a 17/64-inch choke from 9314 feet.

Several shallow dry holes had been drilled in the area during the few years preceding discovery, with anticiaption of finding production similar to that at Conroe, from either the Cockfield or Conroe sands. Location is slightly northwest of a direct line running from the Conroe to the Tomball fields, and by road is approximately 11 miles from the former and 8 or 10 miles from the latter. Access to field is easy by road, as Lake Creek is located near the road running from Conroe to Magnolia, 6 miles west of the field. Practically all freight is hauled by truck, although two railroads pass within a few miles. The field is approached from Houston by either the Conroe or Tomball highways.

The discovery well is located on the south bank of Lake Creek, and since completion, subsequent drilling indicates that the bulk of production will be similarly situated. Eight producing wells have been drilled, with one dry hole credited to the Wilcox, this being an unsuccessful 2300-foot test north of the creek, Superior Oil Company's T. A. McWhorter 3-A. During the middle of May, 1942, two rigs were active in the field, both being company rigs owned and operated by Superior Oil Company, Stanolind Oil & Gas Company, which also has production at Lake Creek, was not drilling at that time.

Production at Lake Creek is obtained from three sands designated by operators as A, B, and H sands, and found at 9200, 9800, and 11,800 feet, respectively. Several other sands have shown favorably on drill-stem tests, although some of these have failed to produce while others have not yet been tested. All sands comprise part of the Wilcox, and contents of each horizon exist in a gaseous condition, hence the structure is classed as a gas reservoir, with regulations identical to those applied to gas fields. Pattern of wells is determined on the basis of obtaining optimum recovery from cycling, and at present, fluid produced is that amount which is brought to the surface with the gas used for fuel for boilers on rigs in the field. Other wells are closed in until erection of the plant.

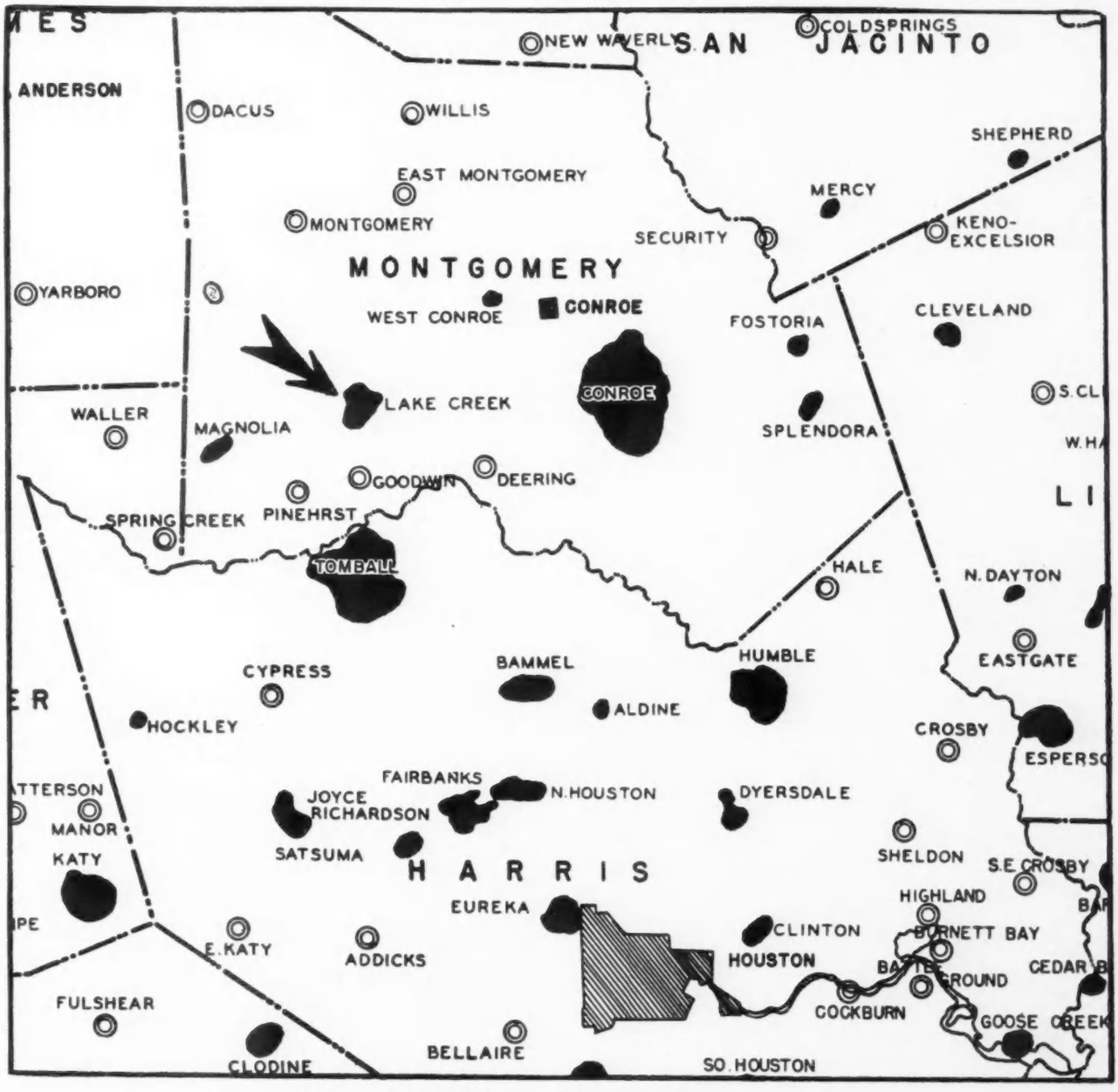
Wells are drilled to completion in about 45 days, including rigging-

up time. Holes are kept unusually straight considering their depth, and no unusual conditions are encountered, partially explainable by the fact that only the most powerful rigs and heaviest equipment are used. All rigs are rotary and those now active are equipped with dual drawworks, having a main 14 x 14-inch engine and a 12 x 12-inch auxiliary. Each rig is provided with three 20-inch pumps and five superheated boilers fed by gas. Shallow wells drilled at each location provide adequate water. Drilling fluid is chiefly natural mud, with weighting materials added at times, the average weight of fluid being between 10 and 11 pounds. Upper portions of the holes are drilled with fishtail or drag bits, but when the top of the Wilcox is found, rock bits are used for the remainder of the hole.

Markers on the discovery well, taken as representative of wells in the field, show the following formations cored:

| Depth, Feet | Zone |
|---|---|
| 3818 | Textularia warroni |
| 4069 | Marginulina cocoaensis |
| 4243 | Textularia hockleyensis |
| 4841 | Textularia dibolensis |
| 5057 | Operculina vaughani |
| 5074 | Cockfield |
| 5248 | Discorbis yeguaensis |
| 6555 | Cook Mountain |
| 6738 | Operculinella |
| 8465 | Wilcox |

Casing program on Lake Creek wells allocates 60 feet of 16-inch conductor pipe, 1500 feet of 10¾-inch protective pipe, and a production string of 7-inch to 10,300 feet, set through the sand for completion. In the single well completed deeper than 10,300 feet, 7-inch was set to 10,300 feet, and a 5-inch liner was run through the sand below 11,800 feet. For completion, casing or liner is perforated liberally opposite the producing formation. Cores were taken on all early wells, but drilling time is now expedited by taking fewer cores as more knowledge is obtained about the structure. Electric logs are run on all wells before setting pipe. Cost of the average well with few cores




Section of Texas Gulf Coast area, showing location of Lake Creek.

is in the neighborhood of $90,000 if drilled to the 10,300-foot level.

### Dual Sand Completions Allowed

By enactment of the Texas Railroad Commission, wells finished in the A or B sands may be dually completed, the usual procedure being to flow fluid from the B sand through 2½-inch tubing and from A through the annular space between tubing and casing. Packers are set in the casing between the two formations, and both sand sections are perforated. To date, no provisions have been made for dual completions involving the newest and deepest sand. Christmas trees are of a high-pressure type, and all wells flow through small chokes. Pressures range from 2800 to 2900 pounds on the tubing, while casing pressures remain constant at about 2500 pounds. Bottom-hole pressures in the various sands are as follows: A sand, 3690 pounds; B, 4280 pounds; H, untested.

Daily production is now 500 barrels, the amount produced with the gas used as fuel for rigs. There is no allowable set on the field, as rules applying to gas fields prevail, and only fluid reaching the surface with usable gas may be produced. Fluid is directed into high-pressure separators for removing gas, and is stored temporarily in steel bolted tanks. No treatment of fluid is necessary before delivery to pipe line, and salt water disposal offers no problem at present, only a slight amount of connate water being produced. Plans are being made to store fluid under pressure when the cycling plant is built, to prevent loss of light constituents by evaporation, although at present no back pressure is maintained. A field gathering system picks up condensate from storage, and through a small line the fluid is taken to connect with the main pipe line of Stanolind Oil & Gas Company three miles east of the field and running from Huffsmith to South Houston.

There is no accurate estimate of reserves of the field, as its development to date is largely exploratory and some sands are yet untested. Productive acreage is held by Superior and Stanolind, and is being developed along conservative lines, with voluntary adherence to 1 well to each 160 or even to each 200 acres.

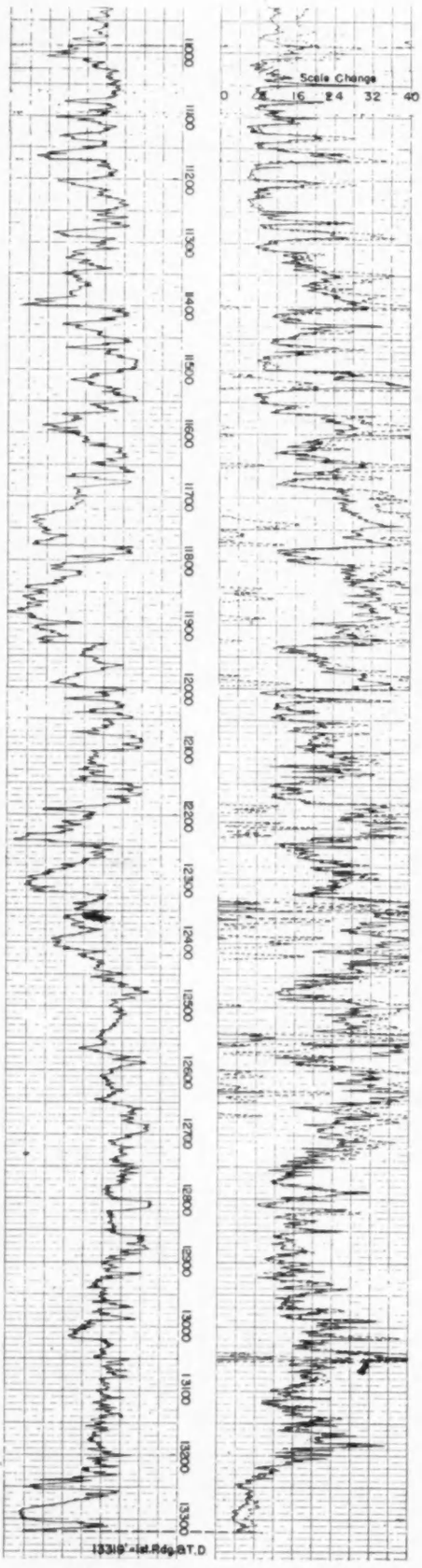
With gas/fluid ratios ranging from 5000 to 10,000 to 1, the gas contains an unusually large volume of condensate, amounting to approximately 7 gallons per 1000 cubic feet, which is rich yield for condensate wells, having considerably greater fluid volume content than gas from many fields which are already successfully cycling. Gravity ranges from 52 to 61 on fluid from the various sands, and a breakdown analysis shows the following yield data taken from stock tank liquids:

| Podbielniak Analysis | Liquid Volume Present |
|---|---|
| Methane | 24.31 |
| Ethane | 5.51 |
| Propane | 10.82 |
| Iso-Butane | 3.92 |
| N-Butane | 5.78 |
| Iso-Pentane | 4.50 |
| N-Pentane | 1.75 |
| Hexane | 43.41 |
| | 100.00 |

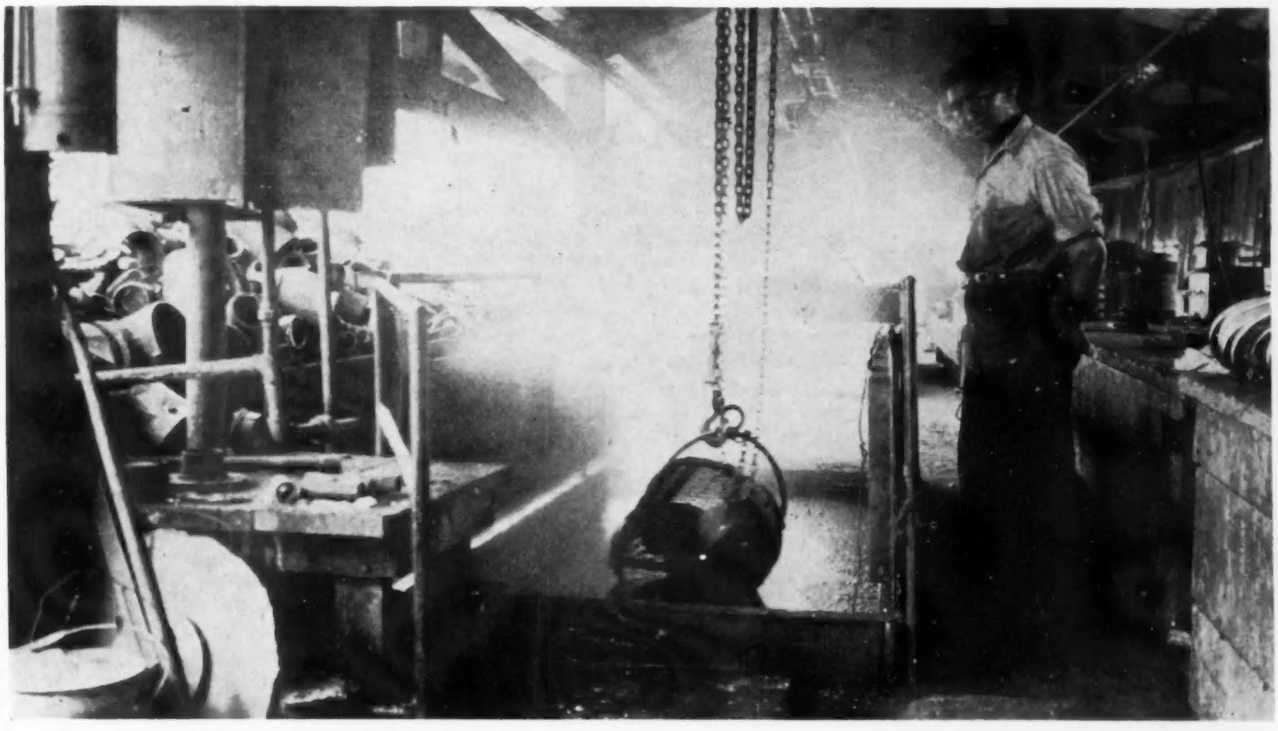
Injection of gas into the formations is complicated by a tight receiving sand with low permeability and only low porosity, further aggravated by high reservoir pressures which will require extreme pump pressures for injecting and will indirectly restrict volume of gas handled in proportion to capacity of equipment. The single dry hole defining the field to the north will probably serve as an injection well, and under present proration, volume of condensate produced while recycling is almost unlimited.

Development of the field follows conservative lines with carefully planned spacing and pattern of wells designed to receive optimum benefits from recycling. Superior Oil Company is now building a large and commodious camp and office, with a sizeable warehouse for storing and maintaining equipment. Lake Creek is located ideally, with easy access by road, and having main line railways a few miles away and a branch line passing near the field. Situated approximately 40 miles from Houston, procurement of equipment is relatively simple, and living conditions will be favorable for inhabitants of the company camp.

The discovery has already spurred Wilcox activity throughout the trend, and lends credence to the belief that similar fields will be found with equally rich fluid yields, producing from this prolific and thick sand body. During the war emergency, when value of high-gravity condensate can not be overestimated, Lake Creek and other fields of this nature contribute vital products toward keeping our mechanized war machine in high gear.




**Electrical log showing a section of the Wilcox at Lake Creek. This well, drilled by Superior Oil Company, is the deepest penetration ever made on the Texas Gulf Coast, and bottom of the Wilcox was not found, although the formation was topped at 8465 feet.**



Vat of boiling cleaning solution with basket of small valves being cleaned after receipt from the field.

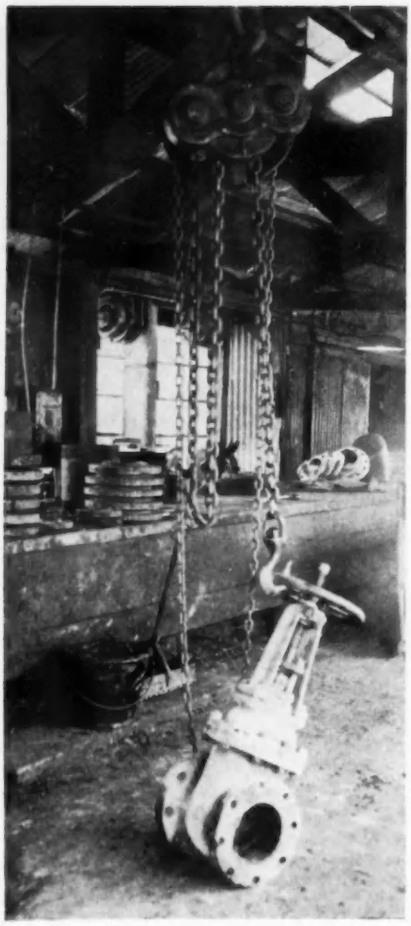
# Expert Reconditioning Salvages Many Valves

By JOHN C. ALBRIGHT

SHOULD gate, globe and plug valves be scrapped? Or should they be salvaged and repaired? A major oil company asserts that a valve should be salvaged and reconditioned when it has a current use value; that by repairing the fitting a greater contribution is made towards the total war effort than if the valve is scrapped. In the first place, the quantity of critical metal in a valve is relatively small. But the man-hours necessary to process the scrapped valve, or its equivalent, for casting a new one, together with the machine time required for finishing is of greater importance, and which can be applied towards matériel to be delivered at the right time in sufficient quantity to "Scrap the Jap!" This company, however, does not recondition all the material gathered from leases in the drive for more tonnage of melting steel. If, for example, the quantity of a certain size and type of valve is greater than the anticipated requirement, the surplus is broken up and sold as scrap metal in such condition that it cannot be sidetracked as "merchandise" in some junk dealer's salvage yard.

A valve is only one of many oilfield items which can be salvaged and reconditioned, but the path which a salvaged valve takes when traveling through the company's repair shop is quite interesting. This valve may be a high pressure fitting removed from a flowing well or broken out of a pipe line in the field or pump station. The size ranges from the smallest to the largest, and may arrive at the salvage shop in a heterogeneous mass of damaged pipe and fittings. When separated from other material, it is thoroughly inspected and sent to the cleaning department. The entire valve is immersed in a hot solution containing an efficient detergent and remains submerged in the boiling liquid until all paint and oil have been loosened and dissolved down to the original metal surface.

Rinsed and dried, the valve is again moved, but this time directly into the shop itself where it is dismantled by breaking out the bonnet bolts with wrenches or cutting the nuts away with a welding torch if badly rusted and corroded. The bonnet, yoke and wedge are lifted from the body as the fitting stands on a supporting device to hold it upright and steady. One mechanic takes charge of the



Gate valves after cleaning in vat of hot solution, now ready to be sent to reclamation shop for reconditioning.

stripped body as another receives the bonnet and connected parts. After inspecting both the seats and the wedge, the method used for reconditioning depends upon the condition of these important parts of the valve.

If the valve has been in a line where infrequent operations is necessary, and the wedge faces and the seats have only minor pits and deformities, the job of reconditioning is relatively simple and inexpensive. A tilting vise head is attached to a substantial post in the floor of the shop, equipped with a double chain clamp in which the body is fastened securely. The tilt is made for one end of the gate body looking up with the bonnet flange opening at one side.

Flat discs of half-inch steel are used with one side finished smoothly, and a hole bored in the exact center. Smaller discs are used on the upper side of the larger one, and also have a similar hole in the center for clamping sheets of abrasive cloth by tucking the ends between the smaller and larger discs and tightened by a nut on the connecting bolt. The top of this bolt is dressed down to the size required for fitting into the chuck of a small portable electric drill. A set of these discs are available for various sized gate bodies which are reconditioned by this method.

The assembled discs and abrasive cloth are inserted into the body of the valve through the bonnet flange opening and centered on the wedge seat on the downward side. The disc stem is chucked into the hand drill and the mechanic starts grinding, applying only that pressure experience has shown to be effective for adequate dressing of the wedge seat. Grinding continues with frequent inspection until the surface of the seat is smooth and all pits have been removed. The valve body remains clamped in the tilting chain vise, but the head of the vise is swung to the opposite position which brings the undressed wedge seat uppermost. The same method is followed until this seat has been finished to compare with the first. Grinding with the abrasive cloth attached to the discs is followed whether or not the valve was made with integral seats or finished with ring seats screwed into the body. Sufficient stock is usually allowed by the valve manufacturer in the original seats so that grinding with cloth and rotating discs will remove pits without weakening this part of the valve. The amount of metal removed from the seats determines the method followed when reconditioning the wedge. If successive grinding has removed a substantial amount of face metal, the distance between the wedge seats is widened, sometimes to such an extent that the original wedge will strike the scale pocket before seating for a shut-off.

If this is the case, the wedge is built up to an oversize thickness with the original type metal to compensate for the amount of metal removed from the seats. The distance between the wedge seats is calipered and the wedge chucked into a lathe and dressed to the necessary thickness. After this job has been finished, the wedge is then ground on a tool developed in the shop for wedge face grinding. This tool contains a heavy cast-iron disc mounted on a vertical shaft placed in a bearing support and driven by a chain and sprocket which is keyed to the lower end of the shaft. A supplementary section of the grinding tool consists of a reciprocating member working above the cast-iron disc with an attachment for clamping the wedge seat and holding it in place on the grinding disc. Appropriate grades of grinding compound are smoothed over the face of the cast-iron disc and the tool started in motion. The disc rotates approximately 60 revolutions per minute with the reciprocating arm moving the wedge back and forth across the rotating grinder. A small electric motor is used with a chain drive to operate the grinding disc and the reciprocating arm. The starting button is near the me-

Large flanged end gate body stripped for grinding wedge seats with an abrasive cloth on special grinding tool.

chanic for control. Both faces of the wedge are ground until the contact surfaces are smooth, then taken out of the machine and fitted into the wedge seats in the valve body.

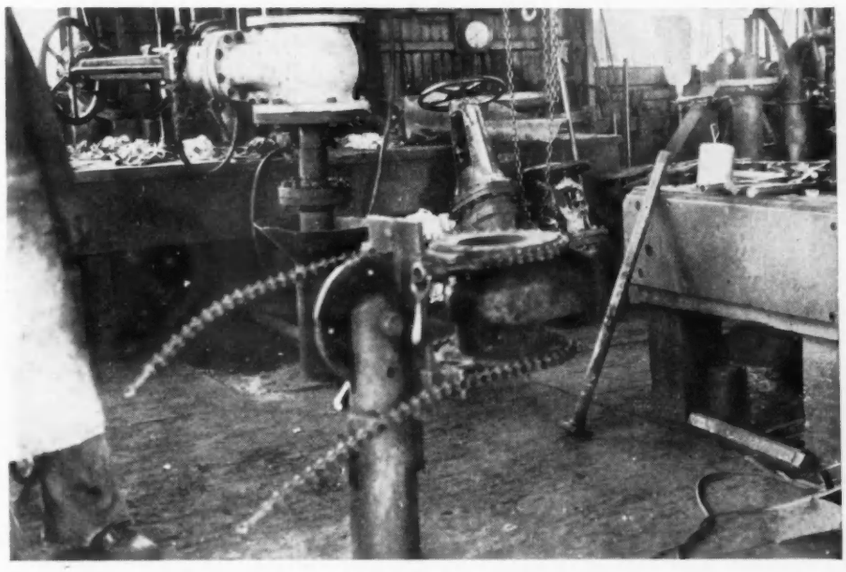
While the body and wedge are being reconditioned, the valve stem, gate wheel and stuffing box are inspected for defects. Accidental striking of the valve by a truck or tractor may sometimes bend the stem and break the wheel. In some cases the stem is broken above the yoke, or the end twisted off in the valve wedge. If the major part of the stem is in good condition, short stubs are welded or brazed to bring the length to the original. Threads are cut, if necessary, and the end squared to fit the gate wheel. The valve is now ready to be reassembled. New bonnet gaskets are provided and the stuffing box filled with the type of packing required for the service for which the valve is expected to be used. When assembly is complete, the entire valve is placed on a test block.

A swinging crane is used to move the valve from the assembly clamp to the test block when it is large and heavy. If the valve is built with flanges, a set of companion flanges is furnished for the various diameters, but with the center opening bored and tapped for a two-inch pipe which is the upper end of the test block. Compressed air with a pressure multiplying cylinder is used for the hydraulic test, and if the valve is designed for 125 pound service, the pressure is doubled. This test is made on all valves even if designed for several thousand pounds, so that double the designed working pressure shall not indicate leaks between the wedge and seats. With most reconditioning operations involving this method the grinding is done so that the valve will pass the test at the first assembly, but if leaks show under the test pressure, regrinding both the wedge and seats may be necessary. In any case, however, the valve does not leave the shop until a final test indicates that it is in condition to withstand pressures and shut-offs in any kind of service. When complete, the valve is painted and sent either to the stock room or returned to the lease or station from which it was removed before reconditioning.

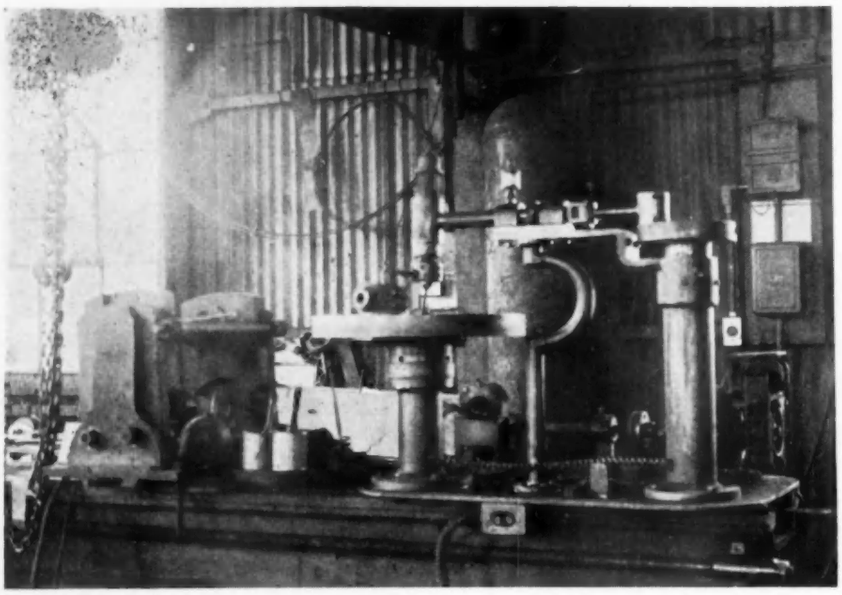
Small low-pressure valves are put through substantially the same process as the larger ones. The usual two-inch bronze valves with screwed ends are sometimes crushed with large pipe wrenches when making up in the line or breaking out. If a valve, otherwise in good condition, enters the reconditioning shop slightly out of round it is placed in a hand press for reshaping. A set of pressure blocks employed in a vise are cut to fit the hexagon end of the valve which is placed between these two members of the press. With a heavy pipe nipple lightly made up in the female end, the pressure is increased slowly until the deformed part assumes its original shape. This same tool is frequently used on brass and bronze body valves to restore the original clearance between the wedge and seats. In a pipe line the contraction is sometimes great enough to stretch the valve so that he wedge will strike the lower part of the valve before seating for a shut-off. Backing the wedge slightly off the seat, and placing the valve end-wise in the press, the mechanic frequently can restore the valve to its original condition. Obviously, rare judgment must be used in this operation so that the grain structure of the valve body will not be greatly disturbed to weaken it at any point.

Small valves frequently are made with removable seats, screwed into the body, some having sufficient stock in the seat face to permit grinding without weakening. Small grinding discs similar to the large valve grinding discs are used for these valves if the seats will respond without excessive thinning. Small pits on both the seats and wedge can be removed by grinding. Successive grinding of heavy seat rings often widen the

**Small gate valve wedge being ground beneath abrasive disc in power driven drill press.**



**Gate valve body chained in tilted vise when ready for grinding of wedge seats.**



Wedge grinder developed by employes in reclamation shop for reconditioning wedges after turning down in lathe.

space until a shut-off can not be obtained with an otherwise good valve. In these cases a spacer ring is cut from substantial metal of the desired thickness and placed behind the seat ring which is then made up tightly in the threaded section of the body. Stems are frequently repaired and new hand wheels furnished for a valve which can be reconditioned at a nominal cost. Testing is done at double the indicated working pressure to insure having a completed valve in condition for any kind or recommended service. Wedges are frequently pitted to such an extent that thickening is required, which is done with similar metal and afterwards turned to a medium rough surface and finished by grinding. Small wedges are usually ground by hand, using a disc of metal with a retaining bar above to hold the abrasive cloth, and fitted with a stem and an adapter to chuck in a power driven drill press. The operator grasps the wedge in both hands and presses upward against the slowly rotating grinding disc until the required finish is obtained on the wedge setting surfaces.

Plug valves which have been roughly treated, used without sufficient lubrication, or in lines carrying corrosive liquids and foreign matter until both the plug and sealing face are roughened and pitted are reconditioned also. The body of the valve is chucked in a lathe and the plug sealing surface turned smoothly to as little oversize as necessary to remove the pits and scores. The plug is faced with metal by using an electric arc for application, built up to such oversize that it can safely be turned down to the size for the enlarged body. The taper for both the body and the plug are maintained in matching tolerances so that, when finished in the rough, the rebuilt plug can be lapped into the body to obtain a complete shutoff. Testing of these plug valves is carried out to double the manufacturer's recommended working pressure.

Globe valves originally equipped with renewable seats are passed through the shop, and in all cases which are practicable, the original parts are reconditioned by grinding, building up and turning down as the case may be. Stems are frequently turned down from a larger broken piece to the size for valves using stems easily made from such pieces, keeping in mind that any valve will be reconditioned which has an expected use value so that new purchases can be reduced to an absolute minimum.

After a valve, regardless of its size or type, has been passed through the shop and the tests indicate a complete shutoff, it is stamped with the reconditioned date before painting. Workmen reconditioning valves in this shop assert that when a valve passes the tests and inspections it will give satisfactory field service. But, when a valve fails to pass the preliminary tests and inspections before beginning the rebuilding job, it is junked and disposed of as such. Moreover, when a fitting enters the junked section it is good for no other purpose than shipment to foundries for melting. The cost of rebuilding a valve varies as to its condition when it enters the cleaning vats. Some valves require only a comparatively short job, consisting of a light wedge and seat grinding and packing after assembling.

Large gate valve mounted on test block after being reconditioned. Pressure gauges on wall in left background.

# Experimental Determinations of the Compressibility Factors of Several Natural Gases and the Application of These Data to Simple Gas Computations

By A. B. STEVENS, Professor of Petroleum Engineering
(Now with U. S. Army)
and
HAROLD VANCE, Head of Petroleum Engineering Department
A. & M. College of Texas

THE Texas Engineering Experiment Station and the Petroleum Engineering Department of A. & M. College of Texas have been conducting a number of tests on natural gas to determine its deviation from Boyle's law at high temperatures and pressures. Methods have been devised for the calculation of these deviations, but the results given in this paper are actual deviations determined by the use of a principle worked out by E. S. Burnett, Mechanical Engineer, U. S. Bureau of Mines Helium Plant and Cryogenic Laboratory, Amarillo, Texas.

The apparatus used in these determinations is a modified form of the apparatus designed by Burnett and his methods of calculation were employed in arriving at the results. For a complete description of the methods of calculation, the reader is referred to an article by E. S. Burnett entitled "Compressibility Determinations Without Volume Measurements," published in the *Journal of Applied Mechanics*, December, 1936. The actual compressibility equipment was assembled by A. B. Stevens, Professor of Petroleum Engineering, A. & M. College, of Texas, and the determinations presented herewith are by Stevens and Lee Freidman, a graduate assistant in the department. Samples of gas and the analyses thereof were furnished by Humble Oil and Refining Company, Magnolia Petroleum Company, and United Gas Pipe Line Company. Lone Star Gas Company lent high-pressure cylinders for storing the samples. These results are presented at this time in order that they may be immediately available to the oil and gas industry. Other results will be published at a later date.

### The Compressibility Factor

Boyle's law may be expressed by:

$$PV = \text{constant}, \qquad (1)$$

where P and V represent the absolute pressure and volume of a fixed mass of ideal gas at constant temperature. By the ideal gas law the behavior of the gas can also be expressed as follows:

$$PV = NRT, \qquad (2)$$

where R is a universal gas constant whose value depends on the system of units used, N is the number of mols of gas under consideration, and T is the absolute temperature. Natural gas, however, is more compressible than predicted by Boyle's law in the lower pressure and normal temperature ranges.

The equation, then, for the ideal gas law as applied to natural gas should be corrected to read:

$$PV = KNRT. \qquad (3)$$

where K is a deviation or compressibility factor, which is independent of the weight or extent of the gas and is a function of the absolute temperature, pressure, and composition of the gas.

The accompanying charts give the experimental results obtained on four natural gases. Using the correct temperature and pressure, one may read the value K directly from these curves and then insert in formula No. 3 to give the correct volume of gas under the conditions encountered.

### Use of Compressibility Factor

If 1000 cubic feet of gas at standard conditions (le, 14.64 and 60° F.), having the composition indicated on Chart No. 1 were compressed to a pressure of 2000 pounds per square inch gauge, and if the temperature at this pressure was 85° F., the volume it would occupy according to the ideal gas law is as follows:

$$\text{Volume occupied by the gas} = 1000 \times \frac{14.65}{2000+14.65} \times \frac{460+85}{460}$$

$$= 1000 \times .00727 \times 1.19$$

$$= 8.65 \text{ cubic feet}$$

The actual volume occupied by this gas is the volume found by use of the ideal gas law above times the "compressibility factor" taken from Chart No. 1 as follows:

$$\text{Actual volume} = \text{volume calculated by ideal gas law} \times \text{compressibility factor for } 85^\circ \text{ F. and } 2014.65 \text{ psi absolute}$$

$$= 8.65 \times .79$$

$$= 6.8335 \text{ cubic feet}$$

### Gas Reserves

In estimation of the amount of gas reserves in a gas field or the gas cap of an oil field the actual vol-

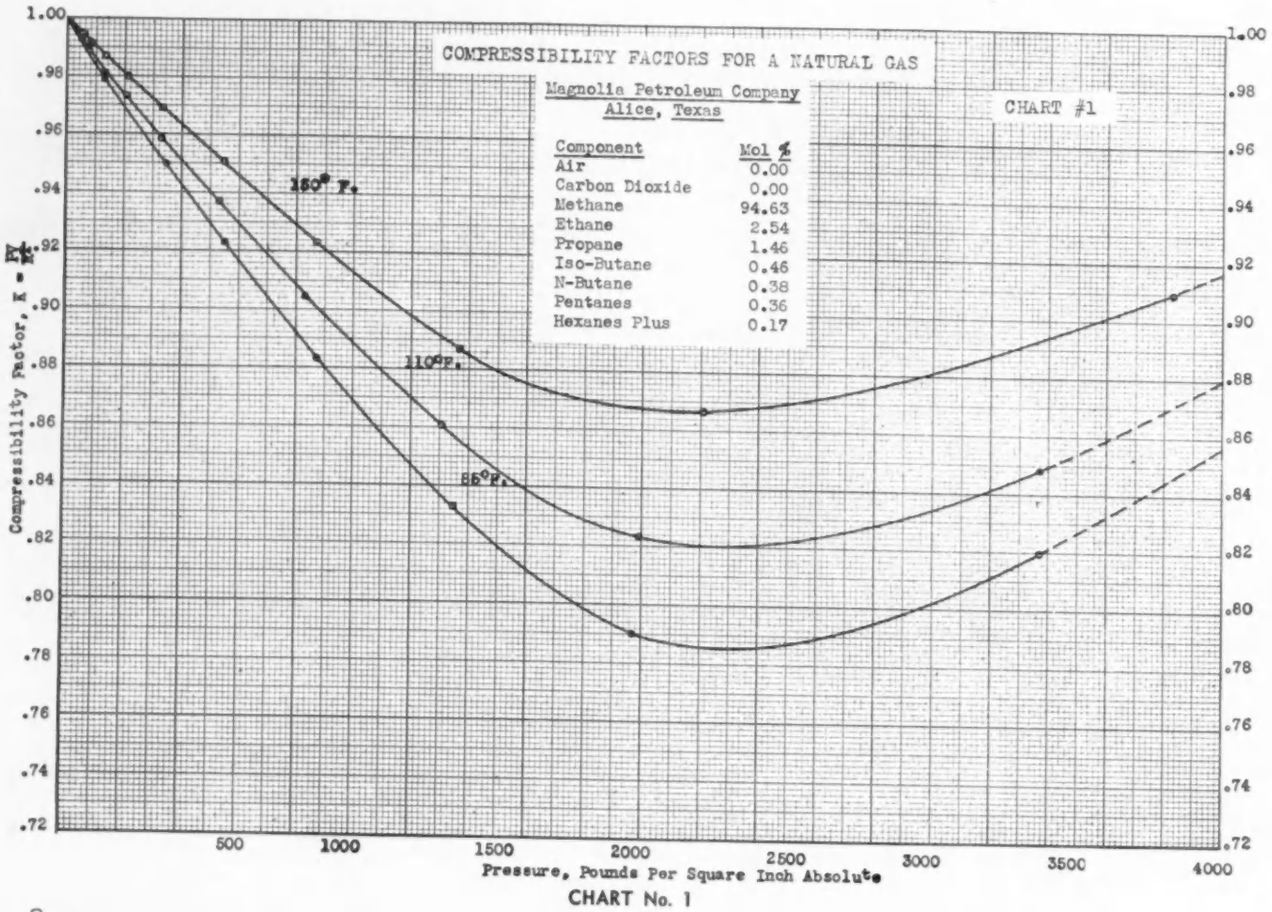



CHART No. 1

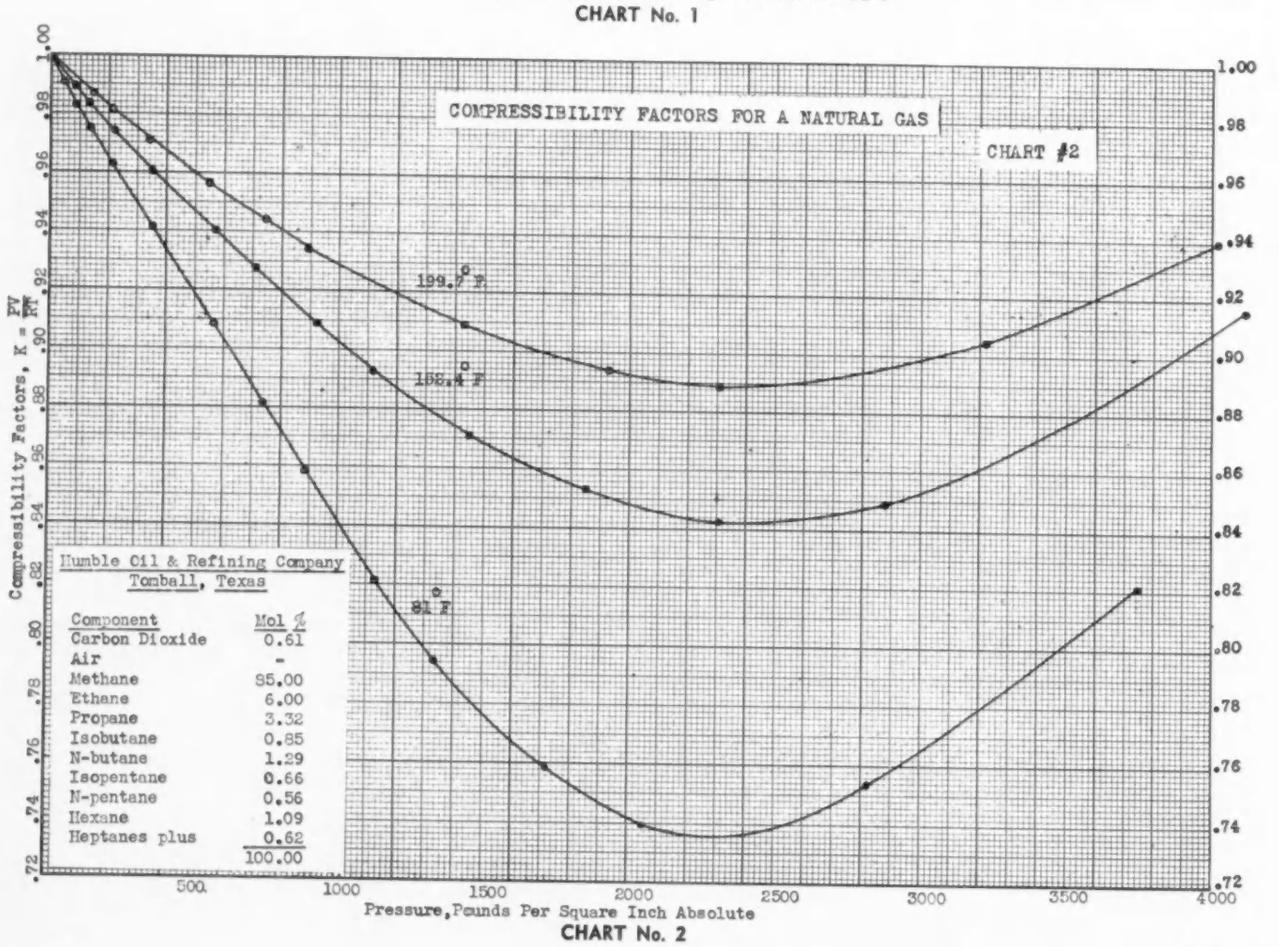



CHART No. 2

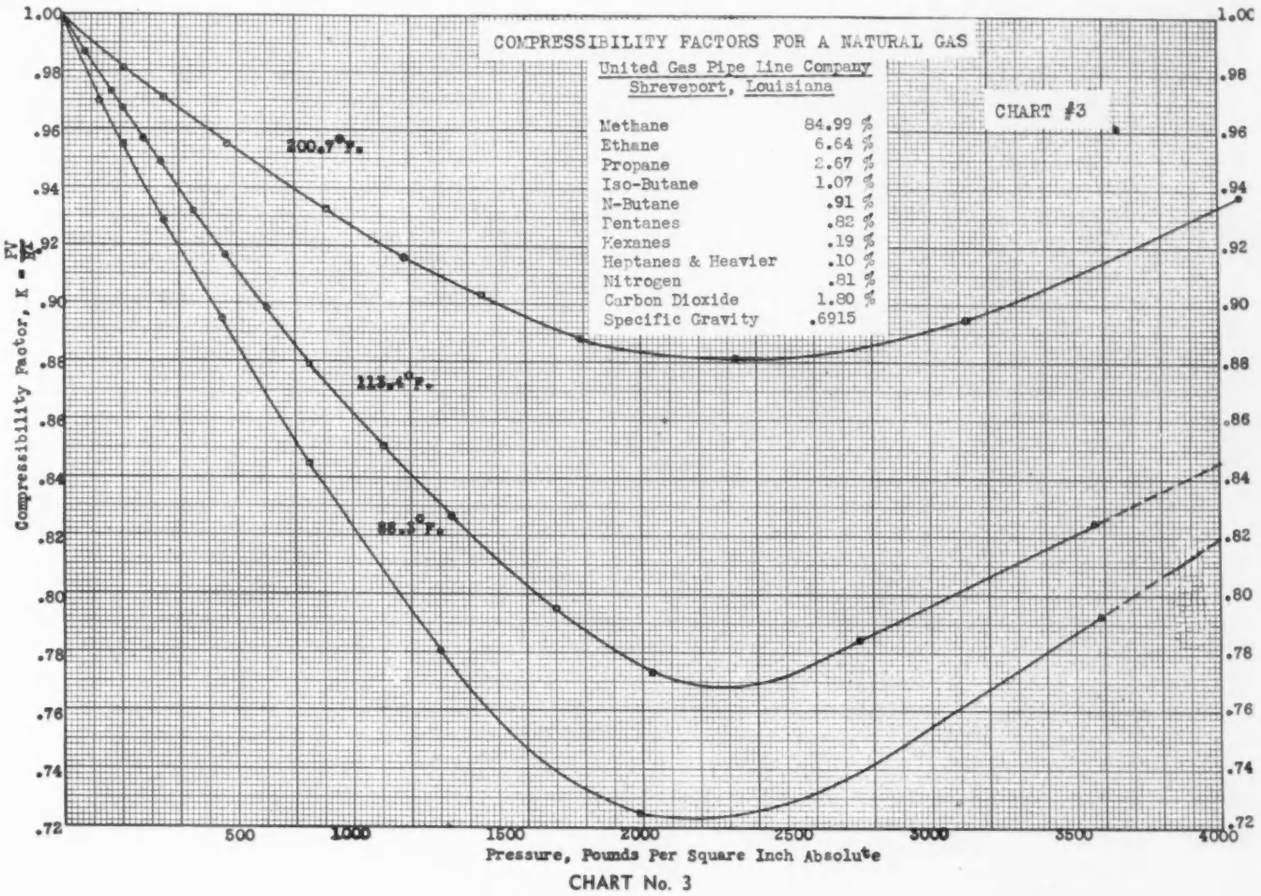



CHART No. 3

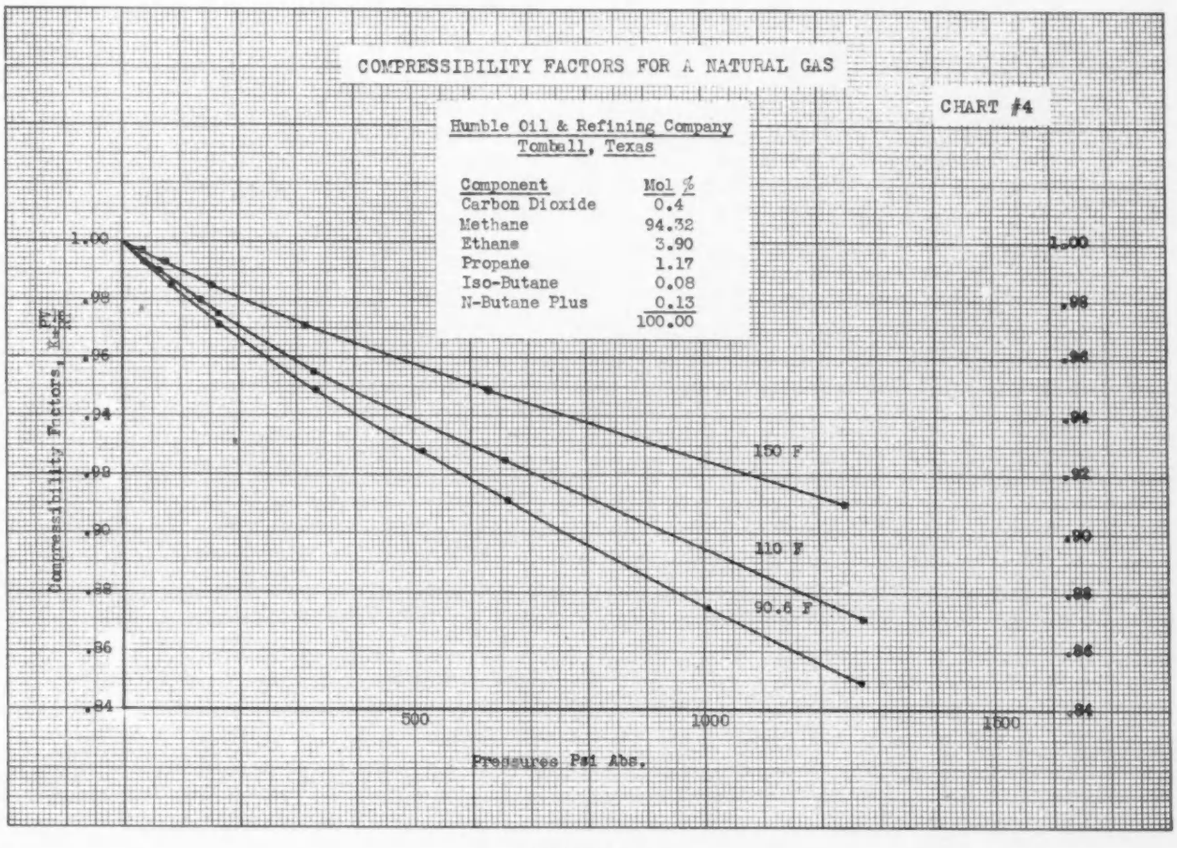
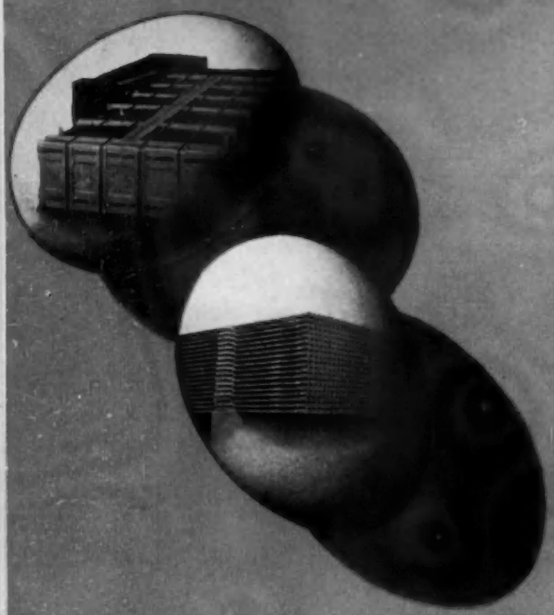



CHART No. 4

# We Handle Them Like



# . . . EGGS

**Throughout the cycle of manufacturing processes, in transportation and in the storage of store stocks, every effort and precaution is exercised to guarantee to the users of National Sucker Rods a product from which they can derive the maximum of service.**

**It would, of course, be impractical to *"Handle Them Like Eggs"* in oil country service, but operators will get longer life from their National Sucker Rods by adopting the following Recommendations on the Care and Use of Sucker Rods which the A.P.I. has compiled.**

## *RECOMMENDATIONS ON CARE AND USE OF SUCKER RODS*

### STORAGE OF RODS

1. Store rods on a clean, smooth platform or on closely spaced wooden stringers that will prevent undue sagging and keep them out of dirt and moisture.
2. Rods come from the manufacturer in bundles to minimize bending and for convenience in handling. Leave them bundled until used.
3. Thread protection as supplied by manufacturers must not be removed until rods are made up.
4. Protect rods from weather to prevent rusting.

### TRANSPORTATION OF RODS

1. In hauling rods, be sure the ends do not drag on the ground.
2. To unload rods, lift them off the truck and lay them down. Never drop them.
3. Unload rods on flat, clean platforms or closely spaced wooden stringers that will keep them out of the dirt and avoid excessive sagging.
4. Never unload rods where they might be run over by trucks or have heavy equipment dropped on them.

### PULLING AND RUNNING RODS

1. Have threads *thoroughly clean* before making up joints and eliminate subsequent trouble. Use a brush and distillate if needed.
2. Keep slack out of rods while stabbing and avoid cross threading.
3. In making up joints be sure they shoulder. If they don't the threads are dirty or defective.
4. Hammering couplings to break joints is very harmful and should not be done.
5. Excessive pulling to free a stuck plunger permanently injures rods even if it doesn't break them. Better pull tubing than ruin a string of rods.
6. Kinking, bending or nicking rods results in permanent injury. Straightening a bent rod increases the injury. Kinked rods should be replaced.
7. Hanging rods in the derrick instead of laying them down is the best way to keep them clean and avoid mechanical injury. If rods must be laid down, use clean boxes, walkways or racks.

### PUMPING OF WELLS

1. Pump wells no faster than is necessary to get the production. A long, slow stroke is easier on rods than a short, fast one.
2. Use the smallest size pump that will get the production. Large pumps mean heavy loads for rods.
3. Keep rigs in good repair to avoid bumping and jerking which are hard on rods.
4. In wells that are hard on rods use a combination string, as for example, two-thirds of ¾-inch rods at bottom and the top one-third of ⅞-inch rods.
5. Use the loosest pump fit that will pump the oil. Tight plungers not only increase the rod load on the upstroke but cause buckling and breaking of the rods on the downstroke.
6. Provide an adequate counterbalance; avoid pumping with a drilling motion.

*From A.P.I. STDS. No. 11-B-Eighth Edition*
*A.P.I. Sucker Rod Specifications*
*Appendix B—Pages 40-41.*

# THE NATIONAL SUPPLY COMPANY

Executive Offices: Pittsburgh, Penna. • General Sales Office: Toledo, Ohio • Division Offices: Fort Worth, Texas; Tulsa, Okla.; Torrance, Calif. EXPORT: The National Supply Corporation, 30 Rockefeller Plaza, New York, N. Y., U. S. A.; River Plate House, 12 South Place, London, E. C. 2, *Limited Liability.*

NSCO
REG. U. S. PAT. OFF.

ume reduced to standard condition may be calculated by reversing the process shown above.

For example: The engineer has calculated the void space available for gas in the gas cap of an oil field and found this volume to be 400,000,000 cubic feet. The reservoir temperature is 152.4° F. and the reservoir pressure 2500 pounds per square inch gauge, and the gas has the composition shown on Chart No. 2.

The volume of gas in the reservoir reduced to standard condition—that is, 14.65 pounds per square inch absolute and 60° F.—according to the ideal gas law is as follows:

Volume of gas at standard condition according to the ideal gas law =

$$= 400{,}000{,}000 \times \frac{2500 + 14.65}{14.65} \times \frac{460 + 60}{460 + 152.4}$$

$$= 400{,}000{,}000 \times 171.65 \times .85$$

$$= 58{,}360{,}000{,}000 \text{ cubic feet}$$

Actual volume in the reservoir reduced to standard condition =

$$\text{Volume calculated by ideal gas law} \times \frac{1}{\text{Compressibility factor taken from Chart No. 2 for 152.4° F. and 2514.65 psi}}$$

$$= 58{,}360{,}000{,}000 \times \frac{1}{.842}$$

$$= 58{,}360{,}000{,}000 \times 1.188$$

$$= 69{,}331{,}680{,}000 \text{ cubic feet at standard conditions}$$

## Orifice Meter Corrections

In the measurement of natural gas at high pressures by the orifice meter method, one introduces an error in measurement unless one makes the proper correction for the compressibility of the gas. The accompanying charts will be valuable in making the corrections provided the gas measured has a composition similar to the composition indicated on these charts. The correct determination of the temperature at the point of measurement is very important, for the compressibility factor varies widely with the temperature. In order that one may correct the volume as measured by the orifice meter which volume has already been corrected for everything except the compressibility of the gas, the actual volume measured is the volume determined by the orifice meter $\times$ the square root of one over the compressibility factor as taken from the curves; that is,

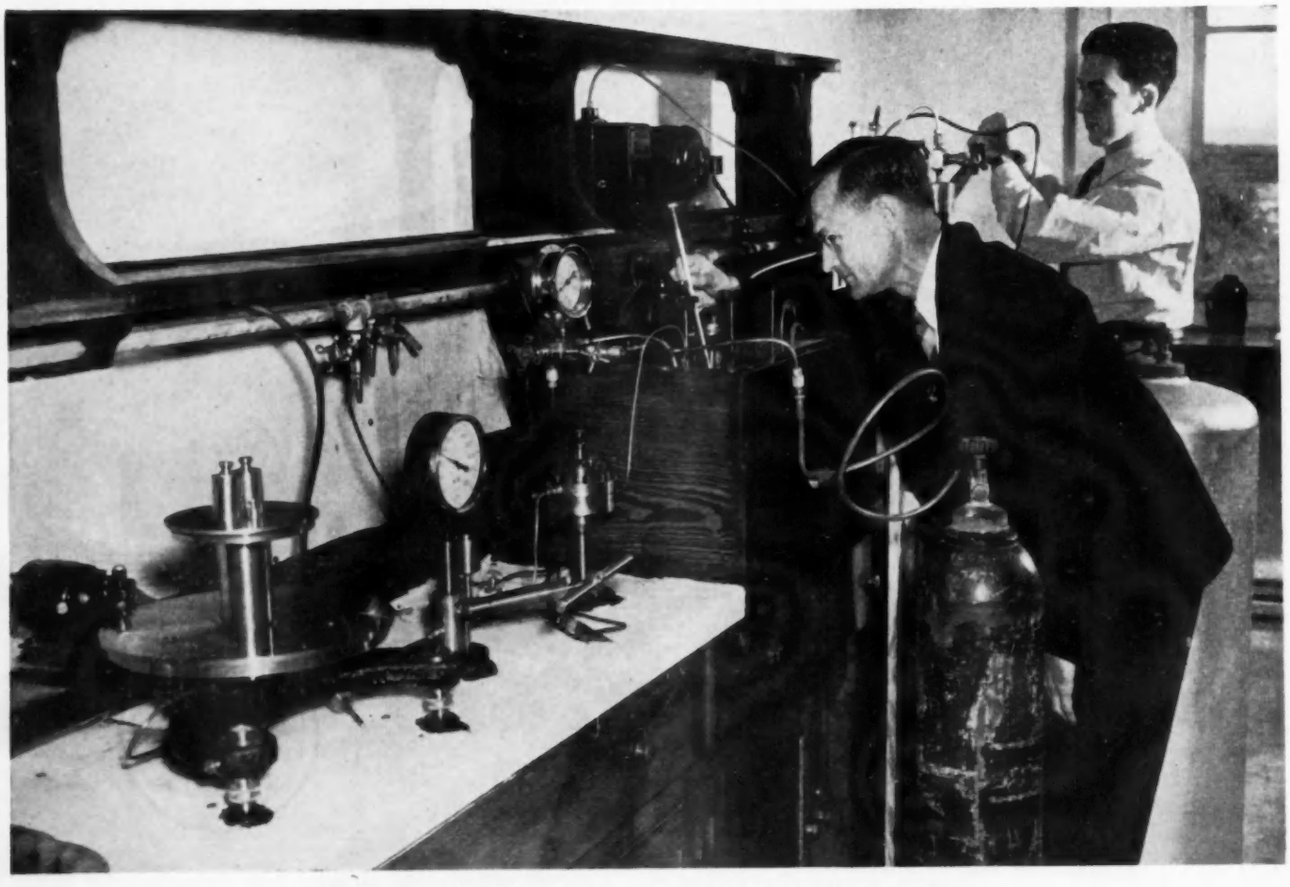
$$\text{Actual volume} = \text{volume calculated from orifice meter reading} \times \sqrt{\frac{1}{\text{Compressibility factor}}}$$

therefore, any time the compressibility factor is less than 1, the actual volume passing the orifice meter will be greater than the volume having been calculated as passing the orifice meter without correction for the compressibility of the gas.

## References


[1] E. S. Burnett, "Compressibility Determinations Without Volume Measurements." Journal of Applied Mechanics, 3:136, December, 1936.

[2] G. G. Brown, "The Compressibility of Gases." The Petroleum Engineer, 12: No. 4, 5, 6, and 7. January, February, March, and April, 1940.

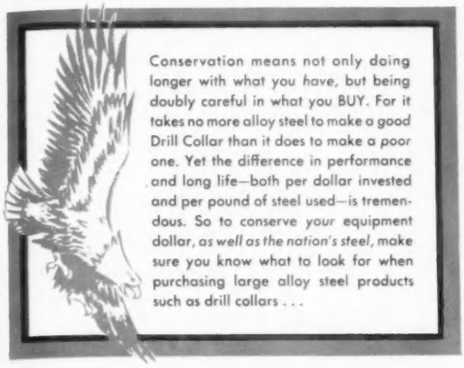
**Apparatus used for determining the compressibility factors for natural gases.**

OIL WEEKLY EDITION

# BAASH ROSS News

BAASH-ROSS TOOL COMPANY • LOS ANGELES • HOUSTON • NEW YORK

A MONTHLY BULLETIN COVERING NEWS OF EQUIPMENT AND OPERATIONS IN THE PETROLEUM INDUSTRY



Conservation means not only doing longer with what you *have*, but being doubly careful in what you BUY. For it takes no more alloy steel to make a good Drill Collar than it does to make a poor one. Yet the difference in performance and long life—both per dollar invested and per pound of steel used—is tremendous. So to conserve *your* equipment dollar, *as well as the nation's steel*, make sure you know what to look for when purchasing large alloy steel products such as drill collars . . .

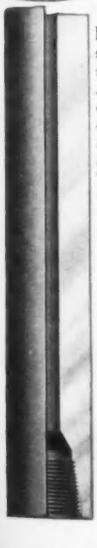
# A TIMELY YARDSTICK for judging drill collar purchases

## How You Can Help Your Company Get Better Equipment . . . Help Your Government Conserve Steel

**TODAY, as never before, oil men contemplating the purchase of new drill collars should study the problem with the greatest of care. For a lot of high grade alloy steel goes into a drill collar and it takes no more metal to do the job *right* than it does to do a halfway job. To assist operators in knowing the essential points to look for in a drill collar, here are the features that have made Baash-Ross Drill Collars famous throughout the oil industry for their long life, smooth operation and high all-around efficiency.**

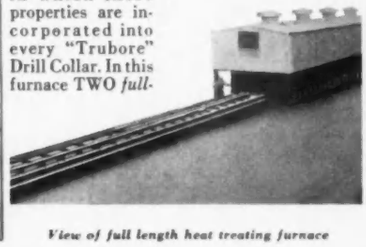
**BALANCED DESIGN:** Remember that a drill collar has several jobs to do, each requiring different properties in the steel. It must have a hard surface to resist abrasion against the raw fresh-cut walls of the hole. Yet it must be tough to withstand the constant jarring, twisting impact strains of rotating the bit. And it must be strong to hold together under the heavy strains of pulling through tight spots, key seats, etc.

Now any metallurgist can tell you that hardness and toughness are two difficult things to combine in *one* piece of metal. If the metal is too hard, then it becomes brittle. If it's too tough, hardness is reduced.



Through years of specialization, Baash-Ross has learned exactly how to select the alloy steel and heat treat it to produce . . . not necessarily the *hardest*—nor the *toughest*—nor the *strongest* drill collar . . . but rather, the drill collar that has *all* the required physical properties—hardness, toughness, strength, resistance to fatigue, impact, etc.—in the best *balance* for maximum service and performance. This all-around balance is a difficult property to *see* in a drill collar, but when you specify "Trubore" Drill Collars, you can be sure it's there!

Illustrated is the giant full-length furnace in which these properties are incorporated into every "Trubore" Drill Collar. In this furnace TWO *full-length* heat treatments are given each collar to produce the most desirable combination of physical properties throughout the length of the forging, and to assure freedom from residual strains. Then the ends are further heated, quenched in oil and drawn to a hardness of 285-310 Brinell, with the hardness individually checked on each threaded connection!



*View of full length heat treating furnace*

*Brinell-testing the ends*

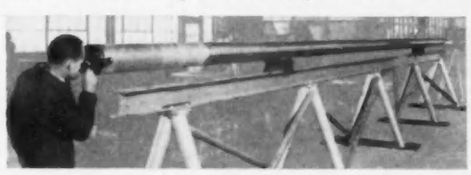
**STRAIGHT BORE HOLE:** Machining the circulation hole in a drill collar is one of the most exacting jobs imaginable. This hole is bored from each end to meet in the middle. If the holes don't meet exactly, a "dog-leg" is left at the center. This is not only sufficient, in itself, to make the drill collar run unevenly, but the trouble gets worse with use. This "dog-leg" causes turbulence in the flow of the drilling fluid, setting up "eddy currents" that eat out and enlarge the hole at this point—throwing the collar—and with it, the drill string—into a bad state of the "jitters." Not only that, but did you ever try to get a retractable core barrel or survey instrument through a doglegged drill collar? Try it!

You'll never find this trouble in Baash-Ross "Trubore" Collars. The circulation hole is held to tolerances so close that special boring equipment has been developed to meet them. And then the hole is *double-checked*—first—by passing a ten foot test bar, not more than ¼" smaller than the bore, through from end to end. It must pass freely at all points *without binding!* Then the bore is again checked by

*Bore accuracy is carefully checked to insure uniform wall thickness*

surveying the hole, end to end, with the precision survey device illustrated. To pass this test the bore must be so accurately centered that the wall thickness does not deviate from the theoretical correct more than plus or minus ¼" in 40 feet, $\frac{5}{16}$" in 50 feet, or ⅜" in 60 feet!

**EXACT JOINT ALIGNMENT:** There's no chance for wobbly joints or severe pin stresses in "Trubore" Drill Collars because *each individual joint* is carefully surveyed for accurate alignment. The projected axes, with respect to the nominal axis of the collar, do not deviate more than ½" in 40 *feet. That's an angle of less than 6/100 of 1 degree—almost perfect!*



*Exact joint alignment is assured by precision survey equipment*

**STRAIGHT END-TO-END:** Added to precision joint alignment and the accurately drilled bore hole, the over-all straightness of Baash-Ross Drill Collars is held to within ¼" of true *over the entire length* to insure a straight, true-running collar at every drilling speed.

**These are only four of the many qualifications painstakingly built into *every* "Trubore" Collar by Baash-Ross precision workmanship. But they are typical of the precautions Baash-Ross takes to do the job *right* . . . to put in top performance per dollar—top performance *per pound of steel used!***

**Why not specify "Trubore" Drill Collars next time you order. They're available in all popular sizes and types, and your nearest Baash-Ross representative will be glad to supply full details. Or write direct!**

### It's *still* the little things that count!

If you've been wondering why Government conservation orders are effecting some apparently insignificant items in daily use, here are some interesting facts that shed considerable light . . .

**JUST SIXTY** of those collapsible shaving cream and toothpaste tubes you've been asked to turn in have enough salvageable tin to do *all* the soldering and make *all* the electrical connections on a bomber.

**ONE FIGHTER PLANE** could be constructed from the aluminum in 125 of the larger juke boxes . . . and that's a better tune to play right now, anyway.

**FOR EACH** automobile NOT made this year, we save enough tin to coat 1000 cans . . . enough nickel to make 100 pounds of nickel steel for armor plate, projectiles and armor-piercing bullets . . . and enough zinc to make 2400 30-caliber brass cartridge cases.

**A LARGE** electric manufacturing company is reclaiming every possible bit of scrap metal—even in the sweepings from the floor—by means of an elaborate system especially set up. In one month the firm salvaged 120,000 pounds of aluminum and almost a million pounds of other non-ferrous metals.

# Depleted Stratum Serves as Satisfactory Butane Storage

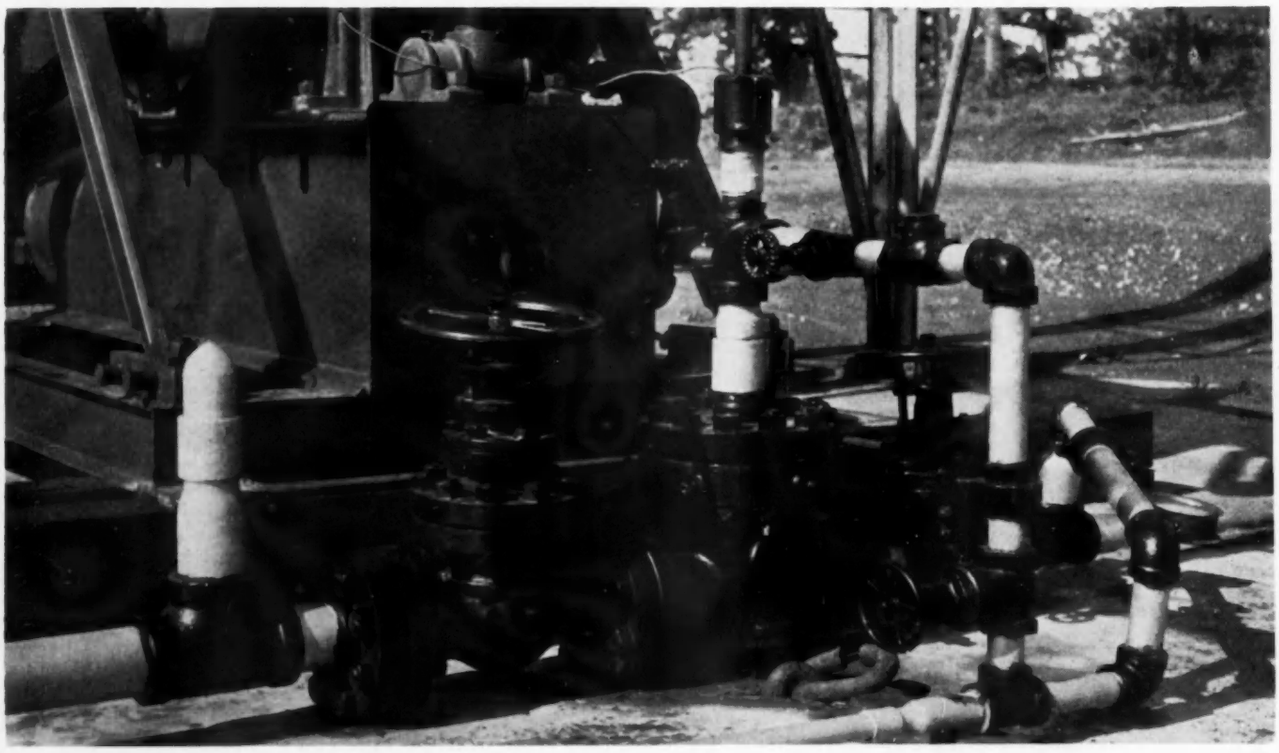
By FRANK B. TAYLOR, Staff Writer

FACED with the problem of storing surplus butane at its Fitts gasoline plant, The Carter Oil Company has turned to a depleted oil zone as a suitable reservoir. The underground reservoir has served adequately to date and has solved the manifold problems of conserving an important product, elimination of both costly and difficult to procure steel tanks, safety in disposal, and continued plant operation in order to supply urgent needs with limited butane demand irrevelant to operating procedure. Nearly 2,000,000 gallons of butane have been injected into the receiving strata in 1½ years at exceptionally small handling expense. About 100,000 gallons have been withdrawn upon demand.

The gasoline plant handles casinghead gas from a number of wells producing from varying depths in this 9-pay field. Butane ends have been produced at an average of 4100 gallons daily, this being considerably in excess of an unstable demand. To prevent waste of this surplus during periods of small demand, the operators decided upon underground storage.

While the limited past experience of injecting light fluid ends into depleted zones has been concerned chiefly with sand strata, in this case a well into a lime formation was selected. An injection well about ¼-mile from the gasoline plant, depleted in Hunton lime early in the life of the field, was chosen. Investigation showed the well originally completed at 3601 feet with top of Hunton picked at 3306 feet. Seven-inch casing was set at 3304 feet, this giving 297 feet of open hole. The formation under test was found to contain a very small and non-commercial volume of gas, and probably an even smaller amount of water. The fact that the well is ¼-mile from any other Hunton producer precluded the possibility of extensive drainage.

Injection of surplus butane ends was begun in November, 1940, simply by pumping the butane into the casing. While this was satisfactory as an injection means, subsequent difficulties in reclamation necessitated injection of the butane into the annular between tubing and casing strings. The formation takes the stock at gravity pressure, no surface pressure being necessary with the volumes handled. Prior to first injection the subsurface pressure at the casing point was 90 pounds per square inch



**Details of manifold at well used for Butane injection.**

# Army is on the march...

## FOR CONSTRUCTION...

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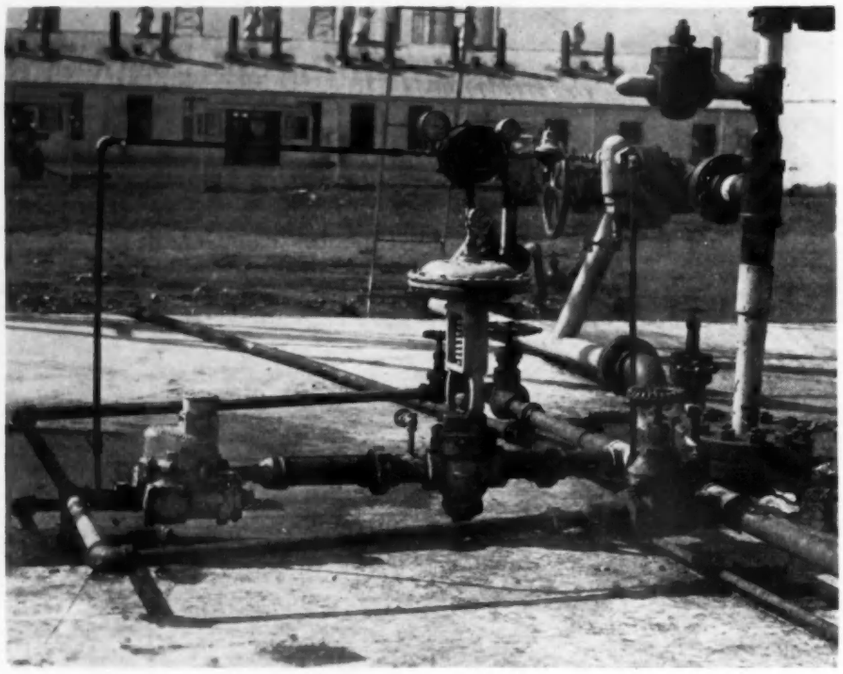
STEEL



**The control manifold for the Butane system is located near the gasoline plant. Well in immediate background has nothing to do with system. Regulator holds 70 pounds pressure against well at this point. Direction of flow is always from left to right through center leg of manifold.**

gauge and that the temperature was checked at 90° F.

In December, 1941, butane demand exceeded plant production. This was the first, large-volume, reclamation effort. Previously, some butane in comparatively small amount was reclaimed from the well in the vapor phase. This could be done by pulling a vacuum on the head to produce both vaporization and flow. However, this method was not satisfactory for two primary reasons. The first of these was the amounts reclaimed per day. Vaporization recovered only about 700 gallons per day, maximum. Also, no little difficulty was experienced by freezing conditions set up in the casing at points of change from liquid to vapor phase. In instances, the casing was effectively plugged by hydrates.

### Butane Reclaimed by Pumping

To meet requirements of withdrawals greater in volume than those possible by reducing the fluid to vapor, it was decided to try pumping the liquid butane. This was deemed possible as a check of the static fluid level showed liquid to 279 feet above the casing point.

A 20-horsepower pumping unit powered with an explosion-proof motor was used to actuate the rod string and 4-cup plunger. The cups were a soft type impregnated with tallow. A 2-inch by 10-foot common working barrel was run on 2½-inch tubing set near bottom in order to produce a fluid condition as dense and stable as possible.

The initial attempt to pump the well failed, and when the plunger and standing valve were pulled they were badly plugged with paraffin. Prior to re-running the valves, natural gas was injected into the tubing and flow was immediately induced through the annulus at a rate of approximately 2500 gallons per day. This action was continued for several days, or until the hole was thoroughly cleaned of waxy or detrimental deposits.

Rods and plunger were re-run, and at 15 strokes (60-inch), slightly off-color butane was produced intermittently at a rate of 15 barrels per hour. This pumping rate has been obtained each time it has been necessary to reclaim from the stratum. Since the fluid was slightly contaminated and off-color it was re-run through the butane fractionator with a very small volumetric loss.

Prior to installation of the pumping equipment, depending upon vapor-phase withdrawal, only 700 gallons could be recovered per day. During the first 25 days of operation following re-running of pumping equipment, a total of 41,154 gallons, or more than 1600 gallons per day, was reclaimed. The daily potential of the well is far in excess of this figure, however, since the equipment was operated intermittently as demand required. During one 7-day period a total of 15,565 gallons, or more than 2200 gallons per day, was withdrawn.

To effectively control the butane as a liquid the well is pumped against 70 pounds pressure. This keeps the butane (95 percent plus pure) in the liquid phase. On test it has been indicated that the critical pressure is 53 pounds at 105 degrees, and that the specific gravity is .572 degrees. However, in practice there were occasions when operations allowed pressures around 40 pounds without appreciable vapor becoming evident. At the well during actual pumping lubrication of the polish rod is obtained by using a gravity feed line from a small reservoir.

In order to sustain the desired pressure of 70 pounds, a pilot-operated regulator is used with the equalizer line having its connection upstream from a piston type positive displacement meter used in a manifold arrangement to measure butane either into or out of the well. This double manifold is located near the plant so that most of the lead line is at 70 pounds.

The arrangement at the well also provides for measurement in either the fluid or the vapor phase. A check valve, suitable controls and an 0-200 pound spring gauge, bypass and orifice flanges are incorporated into the wellhead manifold.

Until a considerable withdrawal from this underground storage reservoir, somewhat in proportion to input volumes, there can be no accurate estimate as to reclamation ultimates. The first withdrawals will be as now; that is by fluid. However, after reservoir pressures and fluid volumes have been considerably reduced, it will still be possible to recover large volumes of the butane through vapor production. Percentage figures must remain conjecture.

Proving certain strata capable of receiving and retaining in storage excess products of this nature, and means to reclaim these products, is an important step in conservation and storage. This advaced technique might prove to be widely applicable not only in solving the problems created by surplus stocks at similar plants, but might be studied as a favorable storage for other excess products due to demand variations.

# Well Completions Climbing from Low Reached in March

THE low point of drilling in the United States apparently was reached during March, as daily average well completions gradually increased in April and May, while June promises to bring further increase, in reflection of the fact that there were about 50 more wells actually drilling on June 1 than on May 1.

Wells actually drilling in the United States on June 1 totaled 2050, compared with 1999 reported May 1. States that have shown increases include California, Eastern States, Michigan, Illinois, and Kansas. Further curtailment of development has occurred during the past month, however, in New Mexico and West Texas, where production has been severely restricted, but other sections of the Southwest have approximately maintained former field activity.

Well completions in the whole country totaled 1538 in the four weeks ended May 23, an average of 54.9 daily, compared with 52.6 daily in April and the year's low of 50.2 daily in March. The 54.9 new wells a day for May, 1942, represented 35 percent fewer completions than the 84.9 daily of May last year, a decrease about in line with the aims of the Office of Petroleum Coordinator, in the program of conserving materials.

In the first five months of this year, United States completions totaled 9101, or 19.2 percent less than the 11,275 recorded for the corresponding months of last year. It should be noted, however, that drilling was relatively low in the first half of 1941 but exceptionally heavy in the latter half of the year.

| STATE OR DISTRICT | TOTAL RIGS IN OPERATION (Drilling, Rigs Up, Shutdown) Year Ago June 1, 1941 | Month Ago May 1, 1942 | Now June 1, 1942 | Percent Change From Year Ago | DETAILS OF JUNE 1, 1942 FIELD ACTIVITY Rigs in Operation: Drilling | Rigs Up | Shutdown | Prelim. Activity: Derricks | Locations | Total Operations |
|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | 8 | 5 | 5 | — 37.5 | 5 | .... | .... | .... | .... | 5 |
| Arizona | 37 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Arkansas | 7 | 35 | 33 | + 371.4 | 26 | 2 | 5 | .... | 15 | 48 |
| California | 283 | 189 | 186 | — 34.2 | 106 | 45 | 35 | .... | 81 | 267 |
| Colorado | 28 | 22 | 27 | — 3.5 | 12 | 1 | 14 | .... | 1 | 28 |
| Florida | 3 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Georgia | 3 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Illinois | 333 | 188 | 199 | — 40.2 | 139 | 16 | 44 | .... | 41 | 240 |
| Indiana | 75 | 59 | 48 | — 36.0 | 38 | 6 | 4 | .... | 25 | 73 |
| Iowa | 4 | 1 | 1 | — 75.0 | .... | .... | 1 | .... | .... | 1 |
| Kansas | 271 | 134 | 173 | — 36.1 | 148 | 17 | 8 | 17 | 20 | 210 |
| Kentucky | 42 | 21 | 22 | — 47.6 | 15 | 1 | 6 | .... | 1 | 23 |
| Louisiana | 191 | 168 | 143 | — 25.1 | 126 | 10 | 7 | 6 | 128 | 277 |
| North Louisiana | 57 | 68 | 63 | + 10.5 | 56 | 5 | 2 | .... | 36 | 99 |
| South Louisiana | 134 | 100 | 80 | — 40.2 | 70 | 5 | 5 | 6 | 92 | 178 |
| Michigan | 144 | 99 | 127 | — 11.8 | 89 | 13 | 25 | 33 | 37 | 197 |
| Mississippi | 29 | 12 | 3 | — 89.6 | 1 | 1 | 1 | .... | .... | 3 |
| Missouri | 15 | 5 | 5 | — 66.6 | 2 | .... | 3 | .... | .... | 5 |
| Montana | 45 | 55 | 56 | + 24.4 | 34 | 5 | 17 | 1 | 2 | 59 |
| Nebraska | 27 | 23 | 22 | — 18.5 | 3 | 2 | 17 | .... | 1 | 23 |
| New Mexico | 117 | 116 | 103 | — 11.9 | 53 | 3 | 47 | .... | 8 | 111 |
| New York | 67 | 123 | 130 | + 94.0 | 88 | 27 | 15 | 9 | 21 | 160 |
| North Dakota | .... | .... | 1 | .... | 1 | .... | .... | .... | .... | 1 |
| Ohio | 280 | 172 | 171 | — 38.9 | 124 | 17 | 30 | 12 | 28 | 211 |
| Oklahoma | 356 | 220 | 207 | — 41.8 | 154 | 21 | 32 | 13 | 34 | 254 |
| Oregon | 3 | 2 | 2 | — 33.3 | .... | .... | 2 | .... | .... | 2 |
| Pennsylvania | 391 | 300 | 439 | + 12.2 | 315 | 48 | 76 | 28 | 75 | 542 |
| South Dakota | .... | 1 | 1 | .... | 1 | .... | .... | .... | 1 | 2 |
| Tennessee | 8 | 4 | 4 | — 50.0 | 3 | .... | 1 | .... | 2 | 6 |
| Texas | 1,306 | 668 | 645 | — 50.6 | 492 | 30 | 123 | 27 | 345 | 1,017 |
| East Texas Border Co.'s | 10 | 7 | 3 | — 70.0 | 1 | .... | 2 | 2 | 4 | 9 |
| East Texas Field | 23 | 1 | 1 | — 95.6 | 1 | .... | .... | .... | .... | 1 |
| Rest of Eastern Texas | 64 | 45 | 43 | — 32.8 | 28 | 2 | 13 | 2 | 6 | 51 |
| North Texas | 199 | 88 | 94 | — 52.7 | 58 | 3 | 33 | 6 | 100 | 200 |
| West Central Texas | 73 | 58 | 60 | — 17.8 | 46 | 1 | 13 | .... | 23 | 83 |
| West Texas | 375 | 211 | 184 | — 50.9 | 153 | 5 | 26 | 4 | 88 | 276 |
| Texas Panhandle | 108 | 46 | 37 | — 65.7 | 28 | 3 | 6 | 1 | 6 | 44 |
| Gulf Coast, Upper | 126 | 59 | 66 | — 47.6 | 48 | 6 | 12 | 6 | 67 | 139 |
| Gulf Coast, Lower | 177 | 93 | 92 | — 48.0 | 82 | 5 | 5 | 2 | 19 | 113 |
| Southwest Texas | 95 | 36 | 41 | — 56.8 | 35 | 3 | 3 | 2 | 21 | 64 |
| South Central Texas | 56 | 24 | 24 | — 57.1 | 12 | 2 | 10 | 2 | 11 | 37 |
| Utah | 7 | 3 | 5 | — 28.5 | 3 | .... | 2 | .... | .... | 5 |
| West Virginia | 194 | 193 | 64 | — 67.0 | 46 | 6 | 12 | 5 | 10 | 79 |
| Wyoming | 61 | 41 | 46 | — 24.5 | 26 | 2 | 18 | 1 | 3 | 50 |
| Total United States | 4,335 | 2,859 | 2,868 | — 33.8 | 2,050 | 273 | 545 | 152 | 879 | 3,899 |

| STATE OR DISTRICT | MONTHLY COMPLETIONS: Total Year Ago, May, 1941[2] | Total Month Ago, April, 1942[3] | Total Latest Data (May, 1942)[1] | Details for May, 1942: New Wells Drilled for Oil or Gas: Oil | Gas | Dry | Others[4] | Old Wells Drilled Deeper | Total Footage Drilled | CUMULATIVE COMPLETIONS: FIRST 5 MONTHS: Total 1941 | 1942 | Percent Change | Details for 5 Months of 1942: New Wells Drilled for Oil or Gas: Oil | Gas | Dry | Others[4] | Old Wells Drilled Deeper | Total Footage Drilled |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 3 | .... | .... | .... | 3 | .... | .... | 4,697 |
| Arkansas | 13 | 7 | 8 | 4 | .... | 4 | .... | .... | 46,373 | 63 | 52 | — 17.4 | 33 | .... | 18 | 1 | .... | 303,963 |
| California[5] | 73 | 47 | 40 | 30 | .... | 8 | .... | 2 | 202,382 | 437 | 309 | — 29.2 | 187 | 5 | 99 | .... | 18 | 1,626,629 |
| Colorado | .... | 1 | .... | .... | .... | .... | .... | .... | .... | 6 | 4 | — 33.3 | 1 | .... | 3 | .... | .... | 22,520 |
| Georgia | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 2 | .... | .... | .... | 2 | .... | .... | 6,519 |
| Illinois[6] | 223 | [10]101 | 137 | 51 | .... | 67 | .... | 19 | 321,551 | 1,235 | 722 | — 41.5 | 379 | 4 | 276 | 12 | 51 | 1,787,892 |
| Indiana | 44 | 26 | 27 | 12 | 1 | 12 | .... | 2 | 50,416 | 196 | 152 | — 22.4 | 64 | 10 | 68 | .... | 10 | 246,696 |
| Iowa | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... |
| Kansas | 186 | 105 | 111 | 50 | 8 | 46 | .... | 7 | 328,435 | 807 | 625 | — 22.5 | 332 | 29 | 224 | 3 | 37 | 1,851,792 |
| Kentucky | 33 | 6 | 9 | 3 | .... | 5 | 1 | .... | 16,412 | 112 | 57 | — 49.1 | 23 | .... | 32 | 1 | 1 | 73,900 |
| Louisiana | 102 | 65 | 86 | 59 | 2 | 25 | .... | .... | 549,293 | 523 | 432 | — 17.3 | 279 | 10 | 140 | 3 | .... | 2,774,327 |
| North Louisiana | 42 | 26 | 47 | 34 | .... | 13 | .... | .... | 197,275 | 191 | 199 | + 4.1 | 123 | 4 | 72 | .... | .... | 765,063 |
| South Louisiana | 60 | 39 | 39 | 25 | 2 | 12 | .... | .... | 352,018 | 332 | 233 | — 29.8 | 156 | 6 | 68 | 3 | .... | 2,009,264 |
| Michigan | 56 | 47 | 46 | 25 | 2 | 19 | .... | .... | 120,895 | 313 | 263 | — 15.9 | 150 | 19 | 93 | .... | 1 | 676,205 |
| Mississippi | 20 | 9 | 5 | .... | .... | 5 | .... | .... | 26,039 | 66 | 57 | — 13.6 | 30 | .... | 27 | .... | .... | 296,677 |
| Missouri[7] | 6 | 6 | .... | .... | .... | .... | .... | .... | .... | 26 | 15 | — 42.3 | .... | 2 | 13 | .... | .... | 7,244 |
| Montana | 2 | 15 | 14 | 12 | 1 | 1 | .... | .... | 29,556 | 66 | 65 | — 1.5 | 44 | 13 | 8 | .... | .... | 149,739 |
| Nebraska | 10 | 7 | 8 | 3 | .... | 5 | .... | .... | 17,231 | 37 | 24 | — 35.1 | 10 | .... | 13 | .... | 1 | 53,772 |
| New Mexico | 28 | 28 | 33 | 25 | 1 | 7 | .... | .... | 91,948 | 141 | 166 | + 17.7 | 113 | 6 | 43 | .... | 4 | 454,431 |
| New York | 67 | 66 | 78 | 46 | .... | .... | 32 | .... | 102,223 | 281 | 467 | + 66.1 | 259 | 2 | .... | 206 | .... | 587,222 |
| Ohio | 118 | 49 | 67 | 13 | 25 | 28 | 1 | .... | 132,864 | 613 | 442 | — 27.8 | 90 | 193 | 146 | 3 | 10 | 1,027,636 |
| Oklahoma | 175 | 106 | 79 | 32 | 5 | 30 | 2 | 10 | 226,500 | 787 | 631 | — 19.8 | 280 | 46 | 230 | 10 | 65 | 1,823,503 |
| Pennsylvania[8] | 373 | 326 | 353 | 167 | 18 | 9 | 157 | 2 | 578,546 | 1,524 | 1,591 | + 4.3 | 752 | 113 | 37 | 678 | 11 | 2,634,948 |
| Tennessee[9] | 1 | 1 | 2 | 1 | .... | 1 | .... | .... | 2,472 | 8 | 6 | — 25.0 | 1 | 2 | 3 | .... | .... | 6,098 |
| Texas | 804 | 406 | 378 | 245 | 10 | 112 | 3 | 8 | 1,677,681 | 3,726 | 2,701 | — 27.5 | 1,776 | 65 | 742 | 44 | 74 | 11,077,635 |
| E. Tex. Border Co.'s. | 5 | .... | 4 | 1 | 1 | 2 | .... | .... | 21,140 | 12 | 6 | — 50.0 | 1 | 2 | 3 | .... | .... | 28,637 |
| East Texas Field | 46 | 2 | .... | .... | .... | .... | .... | .... | .... | 265 | 13 | — 95.0 | 8 | .... | 4 | 1 | .... | 43,518 |
| Rest of Eastern Texas | 64 | 22 | 24 | 16 | .... | 7 | 1 | .... | 112,041 | 186 | 174 | — 6.4 | 113 | 3 | 50 | 7 | 1 | 854,501 |
| North Texas | 189 | 55 | 52 | 17 | .... | 31 | 1 | 3 | 162,039 | 888 | 431 | — 51.4 | 212 | 1 | 184 | 7 | 27 | 1,051,525 |
| West Central Texas | 47 | 18 | 28 | 10 | 5 | 12 | .... | 1 | 63,589 | 233 | 164 | — 29.6 | 66 | 10 | 80 | .... | 8 | 348,907 |
| West Texas | 183 | 119 | 112 | 92 | 1 | 17 | .... | 2 | 502,679 | 753 | 791 | + 5.0 | 654 | 8 | 101 | .... | 28 | 3,337,233 |
| Texas Panhandle | 43 | 17 | 32 | 27 | 1 | 2 | .... | 2 | 92,080 | 215 | 210 | — 2.3 | 170 | 26 | 9 | .... | 5 | 624,614 |
| Gulf Coast, Upper | 59 | 33 | 37 | 29 | 1 | 7 | .... | .... | 263,697 | 278 | 224 | — 19.4 | 153 | 4 | 62 | 5 | .... | 1,478,264 |
| Gulf Coast, Lower | 89 | 81 | 55 | 39 | 1 | 14 | 1 | .... | 340,747 | 473 | 409 | — 13.5 | 273 | 8 | 103 | 22 | 3 | 2,423,944 |
| Southwest Texas | 58 | 51 | 23 | 11 | .... | 12 | .... | .... | 82,862 | 323 | 219 | — 32.1 | 106 | 2 | 107 | 2 | 2 | 734,589 |
| South Central Texas | 21 | 8 | 11 | 3 | .... | 8 | .... | .... | 36,807 | 100 | 60 | — 40.0 | 20 | 1 | 39 | .... | .... | 151,903 |
| West Virginia | 48 | 38 | 54 | 7 | 36 | 6 | .... | 5 | 174,998 | 267 | 282 | + 5.6 | 44 | 182 | 34 | .... | 22 | 830,243 |
| Wyoming | 6 | 9 | 3 | 3 | .... | .... | .... | .... | 13,803 | 40 | 33 | — 17.5 | 22 | 2 | 8 | .... | 1 | 121,442 |
| Total United States | 2,389 | 1,473 | 1,538 | 788 | 109 | 390 | 196 | 55 | 4,709,618 | 11,275 | 9,101 | — 19.2 | 4,869 | 703 | 2,262 | 961 | 306 | 28,445,730 |

[1] Wells completed in 4 weeks, or 28 days, ended May 23, 1942. [2] Wells completed in 4 weeks, or 28 days, ended May 24, 1941. [3] Wells completed in 4 weeks, or 28 days, ended April 25, 1942. [4] Water input, gas injection, distillate, and salt water disposal wells. [5] California figures from American Petroleum Institute except for May, 1942. [6] Data on new wells from Illinois Geological Survey beginning January, 1942, except for May. [7] Figures from Missouri Geological Survey. [8] Bradford and Kane-Clarendon, Pennsylvania, figures from The Producers Monthly. [9] Figures from Tennessee Division of Geology. [10] Illinois statistics for April revised to embody State Geological Survey data on new wells.

# The Trend of Oil in War

By WARREN L. BAKER, Editor

THE industry has completed six months of service under actual war conditions and one week more than a year under federal government coordination of its effort. These have been both interesting and trying periods, featured by exceptionally quick reversals and dislocations. This has been particularly true of the war period, which has resulted in great curtailment of drilling, producing and refining. Coupled with the necessity of using higher-priced transportation and disruptions of normal practices, these conditions have created serious economic problems, brought regional rationing, etc.

Primary basic troubles of petroleum are due to loss of tanker transportation to the East Coast and loss of rubber, which have necessitated adoption of gasoline rationing in the East Coast and threaten its spread throughout the nation.

A quick review of developments during the past 18 months brings to light some interesting conditions.

### Pre-Coordination Period

The first five months of 1941 comprises the pre-coordination period, and sets the scale for measuring developments in the two following periods: (a) pre-war coordination, and (b) war-coordination.

Following the difficulties of 1940, prominent among which were loss of export business and sinking of gasoline prices to extremely low levels, the industry entered 1941 with materially improved prospects. Sharply increased consumption was expected to result in breaking of all production and manufacturing records, which with better inventory relationship and consequently improved prices gave much promise for the future.

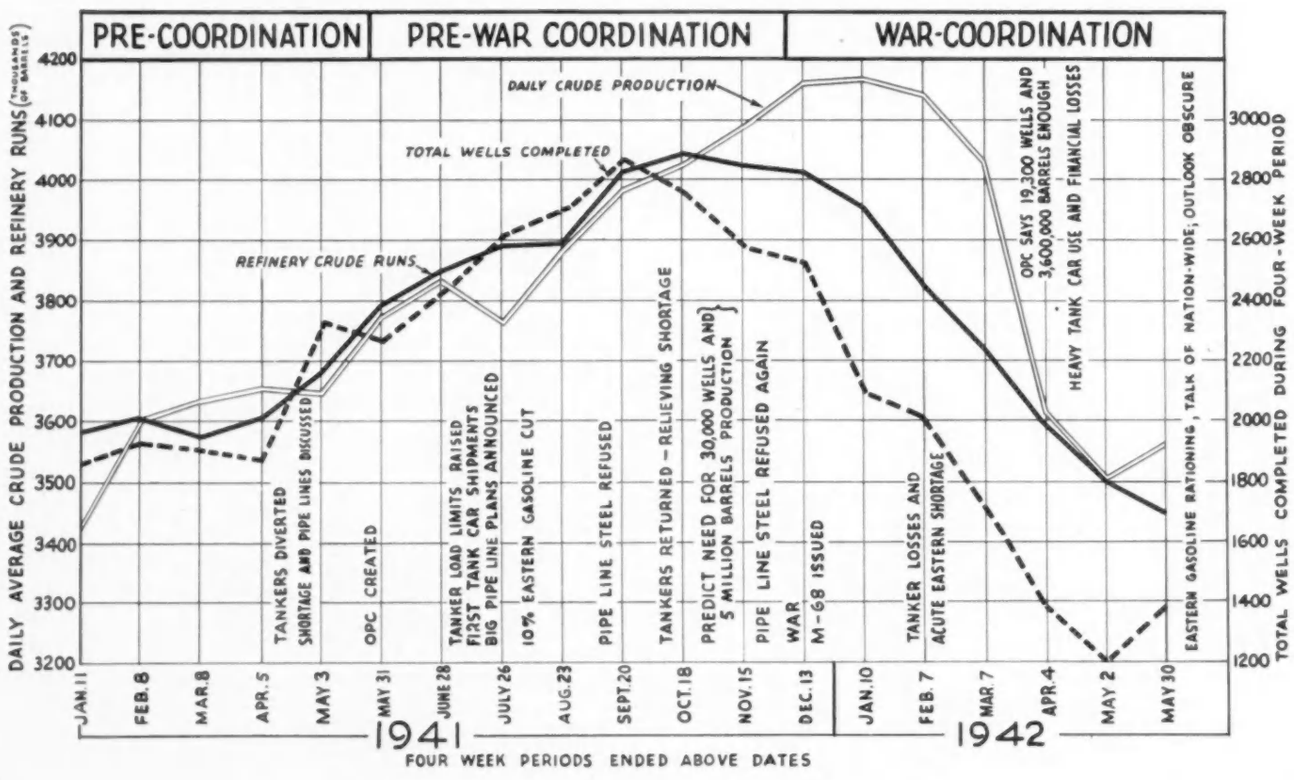
During the pre-coordination era, drilling, producing and refining operations were increasing in scope at steady and sharp rates. Several advances in crude oil and refined products' prices indicated an unusually successful year.

But by April, diversion of tankers to carry British oil was beginning to worry oil leaders, and OPM soon recommended development of supplemental methods of transportation to the East Coast. Looping of existing lines and talk of building transcontinental carriers was begun at this time. Tanker rates rose from 38 cents to 50 cents a barrel for gasoline. The first entirely new defense pipe line was put on paper, the Montreal-Portland line on which work started in June and was completed later in the year.

### Pre-War Coordination Period

This period, from the appointment of Harold L. Ickes as petroleum coordinator on May 28 until the Jap attack on Pearl Harbor on December 7, was featured by con-

**Rising Oil Activities Curtailed Sharply by War Operations**



tinued upward swing in production, drilling and refining. It also was the period for many controversies, all dealing with some phases of the East Coast supply situation and the way of averting a serious condition during the coming winter. But everything considered, troubles were insignificant.

Immediately upon assuming his post as petroleum coordinator, Ickes asserted the then pending shortage on East Coast would force adoption of rationing, and started urging use of more tank cars and building of pipe lines to relieve the situation. Crude shipments by tank cars to East began in early July, although seriously hampered by tariff rates of $2.33 per barrel for gasoline and $2.01 for crude oil from Texas to New York. These rates were reduced later.

Late July saw Congress approve the Cole pipe-line bill, making it possible to use condemnation procedure in obtaining right to cross railroads. Immediately, Ickes announced plans for a community-owned 24-inch crude oil line and 20-inch product carrier from Texas to the East Coast, which companies approved in early August. Contract was let for construction of Plantation line from Baton Rouge to Greensboro, North Carolina.

August saw heavy-fuel-oil supply becoming of increasing concern, as demand for this product rose rapidly due to expansion of industrial, shipping and railroad activity. A 10-percent cut in gasoline deliveries to East Coast filling stations was ordered, but consumption continued high; some difficulty also was being experienced in the Pacific Northwest because of tanker scarcity.

The controversy over ability of tank cars to haul large quantities to the East Coast was at a white-heat point, with OPC stating railroads were exaggerating ability and number of cars.

Oil companies continued expanding and changing East Coast transportation methods at great cost to themselves. SPAB refused priorities on steel for big pipe lines from Texas in September, which would have permitted it to be almost completed by this time. Industry was told by OPC it would have to produce and refine 10 percent more with 25 percent less steel. A $150,000,000 program to treble output of aviation gasoline was mapped out by OPC and oil companies.

October saw a quick change in the situation. Britain returned some of the diverted tankers, easing prospects of East Coast supply shortage and use of tank cars began declining. Everybody was forecasting sharp gains in oil demand, OPC predicting need for 5 million barrels daily in 1942 and stating 30,000 wells had to be drilled annually.

November saw Eastern stocks rise to comfortable levels and everyone gave a sigh of relief that the shortage had been averted. SPAB again refused priority for steel to construct the "big-inch" line, and companies had lost some interest in project due to East Coast improvement. The Portland-Montreal pipe line was finished, saving several days for tankers carrying oil to Canada. The big question was whether industry could supply consumption requirements, and necessity of developing adequate oil reserves was given much consideration with increased wildcatting encouraged.

### War-Coordination Period

With things rocking along in nice fashion and only a bright outlook foreseen, the bombs at Pearl Harbor struck the industry with surprising shock and results. Events began to happen rapidly. M-68 conservation order, requiring 40-acre spacing and other practices was issued December 23, clouded oil's drilling prospects. Nevertheless, greatly increased crude production was still predicted. Production and refinery runs were at near record levels and drilling substantial at the time.

The turn of the year saw OPC start recommending production rates to states, and commence shifting greater production loads to states (primarily Texas) with greater reserve volumes. Texas in January had but 7 shutdown days and an allowable of 1,620,658 barrels per day.

January also brought first discussion of pending rubber shortage, which grew to a raging torrent with Jap capture of Far East plantations. Tire sales were soon banned, many thinking this would reduce gasoline consumption and eliminate need for gasoline rationing along the East Coast. Industry began worrying about reduced motor gasoline sales and heavier demands for fuel oils and aviation gasoline, and foresaw unbalanced refinery yields ahead. Tank-car movements to the East Coast increased, amounting to 100,000 barrels daily late in the month.

First step toward wartime control of producing fields taken when those recovering aviation grade crudes were called upon for additional output at the expense of others.

February saw the U-boat campaign and requisition of tankers for military use bring the East Coast shortage to life again, with little done as yet to improve the transportation situation. Stocks on the East Coast started declining. The industry's aviation gasoline capacity was boosted again as the military program expanded many fold, and now was quadruple original size.

March was a month of sharp curtailment in production and refining. Meanwhile, drilling had tumbled in February and in March dipped lower. Inability to move enough oil to the East Coast, although it jumped rapidly to 400,000 barrels daily via tank car, resulted in a surplus in Texas and Louisiana and shortage in the East. OPC abandoned the idea of establishing production rates on reserve basis and returned to gauging shipping facilities. The situation became so grave OPC had to issue a special curtailment order in mid-March that reduced output of Texas and adjoining states. At this time, OPC gave up the idea of 30,000 wells and 5,000,000 barrels production per day, predicting 19,300 wells and 3,600,000 barrels daily would suffice. Financial losses due to growth of tank-car use had become a serious problem, partially remedied later by the government paying some of charge on the small number of tankers still in Gulf Coast to Atlantic Seaboard service. The rubber problem was realized, and contracts for construction of first petroleum synthetic rubber plants announced.

April saw continuation of March conditions, with more synthetic rubber plants announced, growth of financial losses as tank car shipments rose, and additional talk of rationing. Drilling, production, refining and consumption all continued to slump. A program of relaying, looping, reversing and converting pipe lines to the East Coast was urged.

Feature of May was actual gasoline card rationing along the East Coast, and heated controversies over whether it should be applied on nation-wide basis. Some recovery in production slump occurred, as Texas failed to follow OPC recommendations for only 960,000 barrels per day output; but refinery

operations dipped further. Drilling recovered some, probably seasonal. Work started on some of pipe line program, but other proposals dropped. OPC for third time requested priorities on steel for big crude carrier, which WPB took under advisement as month closed. Tank car shipments rose to 700,000 barrels.

Thus 14 months after diversion of tankers created the first big problem for industry, transportation is still the big question and little has been accomplished in way of improving the pipe line situation although Montreal, Plantation and Southeastern lines have been completed and some looping and reversing done. Chief improvement was growth during spring of 1942 in use of tank cars, but this created serious financial problem due to boosting costs above price ceilings. The "big-inch" line was no nearer, and could be of little service to the East Coast during the coming winter.

Loss of rubber plantations added materially to industry's problems, as it brought reduced consumption and became an important factor in discussion of nation-wide gasoline rationing. To the transportation problem of a year ago, which still existed, had been added such problems as unbalanced refinery yields, financial troubles, surplus gasoline supply in refinery centers, reduced production, problems of building a synthetic rubber industry in double-quick time, and expanding output of aviation gasoline and fuel oils. War had destroyed business-as-usual policies.

### *Stanolind Denies Opposing Alcohol Use for Rubber*

Standard Oil Company (Indiana) denied through E. G. Seubert, president, last week current charges that the oil industry opposes manufacture of synthetic rubber from grain alcohol in order that the industry may keep the synthetic rubber field to itself.

"Standard Oil Company (Indiana)," Seubert said in a statement, "has taken no such stand and does not believe that other companies have done so. At government request we are preparing to produce material from petroleum for manufacture of butadiene, one of the raw materials from which synthetic rubber can be made. We have also undertaken to help manufacture butadiene itself. We certainly are seeking no monopoly for ourselves or for the oil companies on manufacture of synthetic rubber. If it is practicable to make synthetic rubber also from alcohol, we hope that will be done."



[*Continued from page 13*]

demnation, and doubt as to the war value of a waterway development which would require three or four years.

Congressmen who voted against the measure made it clear that their opposition was not directed toward the pipe line, and there were clear indications that any legislation dealing with that project alone would receive prompt and hearty support.

Largely, it developed, the opposition to the bill was based on the cost of extending the canal through Texas, which would account for a large part of the appropriation sought for the project, at a time when the Treasury and Congress were devoting their energies to raising money for the conduct of the war.

There was considerable criticism of the effort to push the bill through, which was maneuvered by the Texas delegation after the Rules Committee had granted a rule on the measure which would expedite its consideration. Under a suspension of the rules, debate on a bill is limited to 20 minutes on each side and there can be no amendment of the legislation; brought up under a rule, the bill could be thoroughly debated and amendments could be offered and acted upon.

Still the beneficiary of a rule, the Mansfield bill may be brought up again, although its Texas author gave no indications that he would press the matter further after the House refused it so decisively.

☆

**CRUDE PRICES:** Chances of securing OPA approval of an increase in the price of crude faded last week with submission to the price agency of the report of the Tariff Commission's investigation, reportedly indicating that the cost of production has remained constant over the past three years.

At the request of OPA, following the receipt of applications for price increases, the commission last year undertook a survey of production costs between January, 1938, and September, 1941.

It is understood that the commission reported to Administrator Henderson that increases have occurred in the costs of labor and material but that they have been offset by managerial efficiency, and that the large quantities of fuel oil demanded as industrial activity expanded also had a tendency to maintain costs at a constant level.

Henderson has repeatedly refused to take any action on applications for a crude price raise, the first of which was submitted last July, until investigation of cost factors was completed. The report has not been made public, nor has OPA indicated whether it would base its decision on the Tariff Commission findings.

☆

**OIL CORPORATION:** What amounts practically to incorporation of OPC, with far wider powers than it now possesses to direct the course of the oil industry and protect it against financial loss, is provided for in a bill introduced in Congress June 1 by Senator Tom Connally of Texas to establish a War Petroleum Corporation with a government-subscribed capital of $500,000,000.

The corporation would be headed by the oil coordinator and would be within his office, but its existence would be restricted to the period of the war and for six months thereafter.

The policy of the organization, as set forth in the bill, would be "to assure, in aid of the successful prosecution of the present war, the maintenance of an adequate supply of petroleum and its associated hydrocarbons, and the products thereof, and the utilization with maximum efficiency of the petroleum resources of the United States, its territories and insular possessions, together with the facilities for making such petroleum and petroleum products available, adequately and continuously, in the proper forms, at the proper places, and at prices not in excess of those established by the Office of Price Administration, to meet military, industrial, and essential civilian requirements."

To carry this policy into effect, the corporation, among other things, would be empowered to cause:

(a) Supplies of petroleum and petroleum products to be delivered in any areas in the United States, its territories, and insular possessions, where the coordinator shall find that there exists an imminent shortage of such supplies

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to meet military and essential civilian requirements;

(b) The construction, extension, conversion, maintenance, relocation, or more efficient use of any facilities for the transportation or storage of petroleum or petroleum products;

(c) The conduct of refinery operations so as to secure, either generally or in specific instances, necessary amounts of particular petroleum products;

(d) The maintenance of adequate reserves and production of such petroleum and petroleum products as are of strategic importance in quality or location, and

(e) The return to natural underground reservoirs of petroleum or to cause other disposition to be made, upon such terms and conditions as will adequately protect the interest of the United States, of any petroleum products purchased by the corporation for the purpose of assuring the production of other necessary petroleum products.

To carry out the plan set forth, the corporation would be authorized, within the limits of its available funds:

(a) To make loans, if fully and adequately secured;

(b) To purchase petroleum and petroleum products at such prices as the coordinator may determine to be necessary, and to sell such petroleum and petroleum products at prices no higher than those prescribed by the Office of Price Administration;

(c) To pay transportation charges covering the movement of petroleum and petroleum products;

(d) To transport and store petroleum and petroleum products both above and underground.

In this connection, however, the measure provides that "no purchase of petroleum or petroleum products shall be made at prices higher than those prescribed by the Office of Price Administration except where the quality or quantity of such petroleum or petroleum products has been so altered by the producer thereof in response to any direction of the coordinator as to cause the cost thereof to be increased and the amount of such excess over the price ceilings established by the Office of Price Administration which the corporation may pay and the producer may receive shall not exceed the increased cost of such altered production as determined by the coordinator."

In the absorption of increased transportation costs, it is provided no payment for transporting oil or products owned by others than the corporation may be made in an amount which exceeds the difference, as determined by the coordinator, between the rates prevailing on March 1, last, for such movements by normal, pre-war methods of transportation and any increased rates paid or to be paid in response to any direction of the coordinator.

The bill is designed to meet all the needs of the industry occasioned by war dislocation—to compensate the companies for higher transportation costs, to enable the government to purchase distress stocks occasioned by the disruption of transportation facilities, and to permit loans to small operators faced with bankruptcy as a result of the closing of their markets, etc.—while at the same time getting away from the problems which would be involved in the provision of an out-right subsidy.

At his weekly press conference, Coordinator Ickes said there is a "good deal of merit" in the Connally bill, but OPC has not yet been asked to report on it officially.

The bill also came up before PIWC, which took no position on it but decided to gather material for submission to the Senate Finance Committee in the event hearings are held on the measure.

☆

**FREIGHTS:** The federal government will absorb the war-risk insurance on oil cargoes as well as the other emergency costs which were taken over by the War Shipping Administration on May 19.

The plan was established to preserve existing price levels by relieving consumers of the heavily increased costs of maritime transportation, and provided that WSA would assume all costs of such ship movement over and above the basic maximum charter rates established by the Maritime Commission in January.

There was some doubt as to whether the plan included war risk insurance, and to clear the point up Admiral E. S. Land, administrator of WSA, wrote Price Administrator Henderson that he was prepared to provide such insurance on oil cargoes at the rates effective last January 20, beginning as of June 2.

☆

**MATERIALS:** The oil industry was warned by OPC June 8 that no priorities will be granted for critical materials for which substitutes can be found.

WPB has declared that the following materials, most of which are used at times by the oil industry, are scarce materials, vitally needed for war purposes and in general are termed critical: aluminum, asbestos, cadmium, calcium-silicon, chromium, cobalt, cork, copper and copper alloys, lead, magnesium, plastics, nickel, rhodium, steel and iron of all types, and their alloys, tin, tin plate and terneplate, tungsten and tungsten carbides, vanadium, zinc and zinc-coated metals, cotton duck, manila fiber and cordage, jute, burlap, kraft paper, lead, manganese, mercury, sisal, and rubber of all types, new and reclaimed.

"Engineers designing plants for which a project application will be made should take into consideration the vital and scarce nature of these materials and in every instance should eliminate their use if it is at all possible to do so, finding substitutes therefor, and where elimination is not possible, reduce the quantity as much as possible," the OPC materials division declared.

### Items Not Permitted

Also listed were certain classes of materials and equipment, use of which is not permitted by WPB, as follows:

Galvanized iron and steel pipe, except where the properties of the water demand zinc coating.

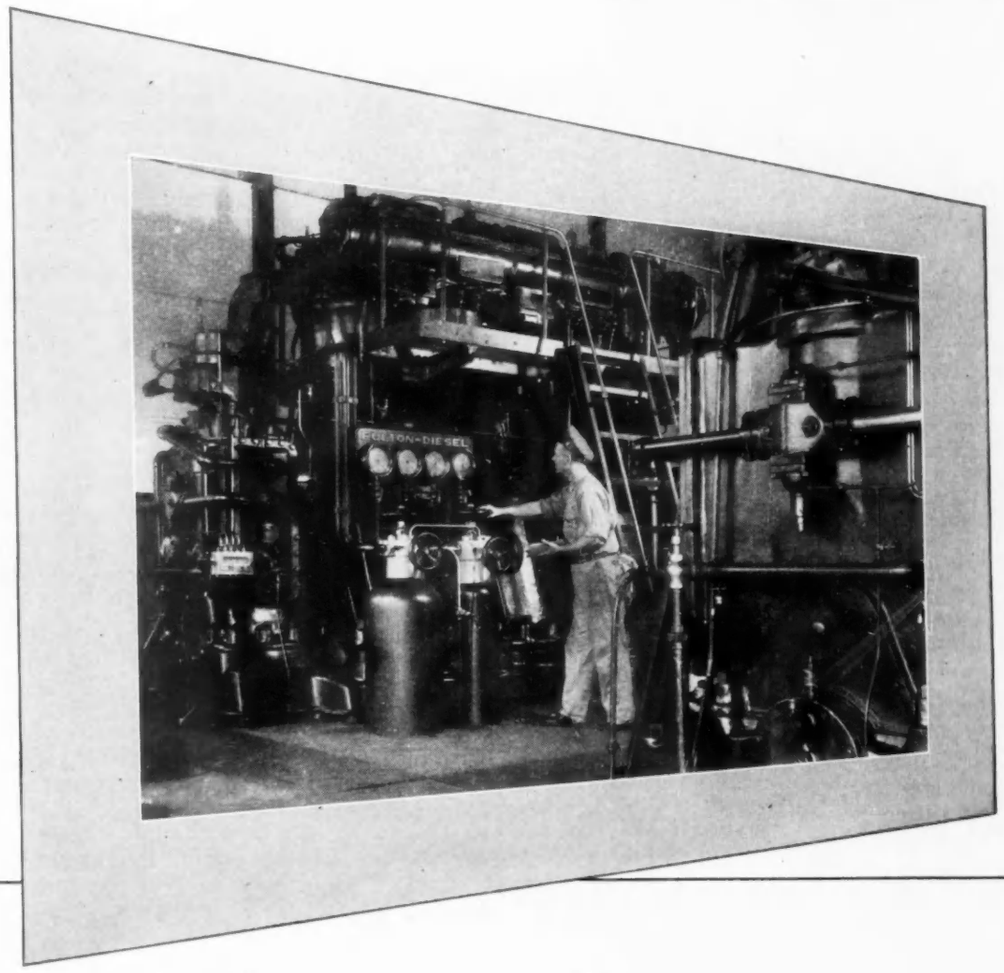
Steel water tanks (except closed pressure types).

Both black and galvanized corrugated iron and sheet for side walls and roofs for buildings.

Eighty-five percent magnesia pipe covering for insulation pur-

*MAINTENANCE RECORDS OF MANY DIESELS PROVE THE* **HIGHER PROTECTION VALUE**

*OF* **Gulf Parvis Oil**



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**3.** "Gulf Parvis Oil has helped us avoid liner replacements for many years," says a power plant Chief Engineer.

**4.** "One liner change, no other repairs in 20 years of 16-hours-a-day service—that's the hard-to-beat maintenance record we've set with Gulf Parvis Oil," says a municipal power plant Superintendent.

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poses except where temperatures exceed 212°.

Metal-base plumbing fixtures.

The use of cork for insulation except where extremely low temperatures are required.

Valves and fittings which are trimmed with chromium, stainless steel, bronze, brass, or nickel except to meet special processing requirements. Valves over two inches with brass bodies are usually prohibited.

Steel sash, windows and frames, steel bunks, steel doors and frames, steel roof decking, metal roofing, except where extreme fire hazards exist.

New steel storage tanks to be used for fuel oil, crude and other heavy oils whenever it is practicable to construct concrete storage tanks.

Cast iron soil pipe, or sewage pipe except those of standard weight and then only those portions required within a building.

Ferrous metal for water mains where the use of asbestos cement, concrete or wood pipe is practicable.

Water-well screens made of brass, copper and other non-ferrous alloys. Gravel-packed screens or screens of other types will serve the purpose for a reasonable length of time.

Steel wire fence of the chain link type.

Ferrous metal culverts.

Electrical conduit (metal) where wiring can be safely installed without it.

Stand-by equipment. Spare parts to be held to a bare minimum.

### Priority Applications

In a statement designed to clarify the situation, the material division of the coordinator's office cautioned that applications for priority ratings will be expedited more promptly if they are made out in accordance with WPB rulings and if the required forms are properly filled out.

"Construction equipment of all kinds and oil-well-drilling equipment must not be included in a project application since such equipment does not become a permanent part of the finished project," it was explained.

"Machine tools, rubber products, chemicals, business machines, office furniture, office supplies, automobiles, trucks and tires should not be included in project applications; there are special orders governing the rating or distribution of these materials.

"Aluminum and steel plate are on allocation and are being allocated only to those projects which are extremely important in the war program. Projects should be designed so far as possible to minimize or eliminate their use. Every effort should be made to keep steel plates under 3/16-inch, where steel plates must be used.

"The most critical materials are aluminum, stainless steel, chromium steel, nickel, tin and copper. It is probable that items of material requiring these alloys will be denied by the War Production Board unless accompanying information is provided with the project application explaining why these alloys must be used, why no substitute can be used, and a further statement to the effect that the percentage of critical metals in the alloys has been reduced to a practical working minimum.

### Easy on Alloys

"The petroleum industry's refining projects require a great deal of chromium steel," it was stated. "The War Production Board is insisting that projects be designed with the least amount of chromium or other alloy metals possible. The War Production Board suggests that where scarce alloys are necessary, we plan on frequent replacements if, by so doing, we are able to reduce the amount of such scarce materials, unless such replacements would cause extraordinary expense, such as tearing down boiler settings, etc. Frequently 1½-percent-chromium steel will give two years service, in equipment which is usually designed with 4-to-6-percent chromium. Every pound of chromium steel which the petroleum industry uses must be taken from a ship or a shell, and consequently, every pound of chromium steel is precious. All steel plate is being allocated and only those projects which are the most important in the war program are receiving it. The shipbuilding program is behind schedule because of the shortage of steel plate; therefore, projects should be so designed as to minimize to the greatest extent possible the use of steel plates and sheets.

"Steel storage tanks require plate for the large sizes and sheet for the small sizes. Before requesting new tankage, every effort should be made to find available second-hand tanks which can be cut down, moved, and re-erected at the desired location.

"All large compressors are now on strict allocation and are not available except for the most vital projects. Wherever compressors, pumps, electric generators or motors are required, every effort should be made to find second-hand equipment which will do the work. They are all scarce and critical.

"Where tubular goods are required use second-hand materials whenever possible. Salvage unused lines and if possible lines which are not operating to capacity. Whenever new pipe is required, a size should be chosen only sufficiently large to carry the amount of fluid which must be handled, and the weight of the pipe should be consistent with the pressure under which it must operate. Use the smallest and lightest pipe possible. Do not allow for greater capacity or greater pressure which might be required at some later date. Seamless pipe and tubing are not available except where required in processing equipment subject to high temperatures and high pressures. When possible, specify welded pipe in your application.

### Building Without Steel

"Buildings and other structures should be designed to use as little structural or other steel as practicable. Structural steel may be used only when it is necessary to support or carry heavy equipment, craneways, etc. Loading racks should be designed with wooden structures and walk-ways. Bear in mind that the use of steel alone is not fireproof construction.

"It is the practice of the War Production Board to assign preference ratings sufficiently high to insure the procurement of materials only when it can be shown that the materials are to be used in a project necessary in the prosecution of the war. In very few instances is the War Production Board authorizing an increase in rating simply because material cannot be procured on the rating which has been assigned.

Haystellite cast tungsten carbide inserts are available in thirteen different lengths and cross sections. One type is shown here, actual size.

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## *for most efficient drilling tools*

Haystellite cast tungsten carbide inserts are *hard* enough to withstand severe abrasion—*tough* enough to withstand shocks. Well designed bits—correctly set with Haystellite inserts and hard-faced with Haystellite tube rod—can be depended upon to make maximum footage of out-to-gauge hole. For instance:

. . . "1,900 ft. in 13 hours and only ¼ in. out of gauge when pulled, at James Slough, California."

. . . "1,550 ft., including 50 ft. through hard sand, yet still well-fingered and out-to-gauge, in the Rio Grande Valley, Texas."

. . . "Still in fine condition after 1,200 ft. through boulders, shale, and sharp sand, in Caddo Parish, Louisiana."

For efficient tools that produce records like these, standardize on Haystellite inserts and tube rod.

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# PRACTICAL OPERATING *Hints* FOR

**THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.**

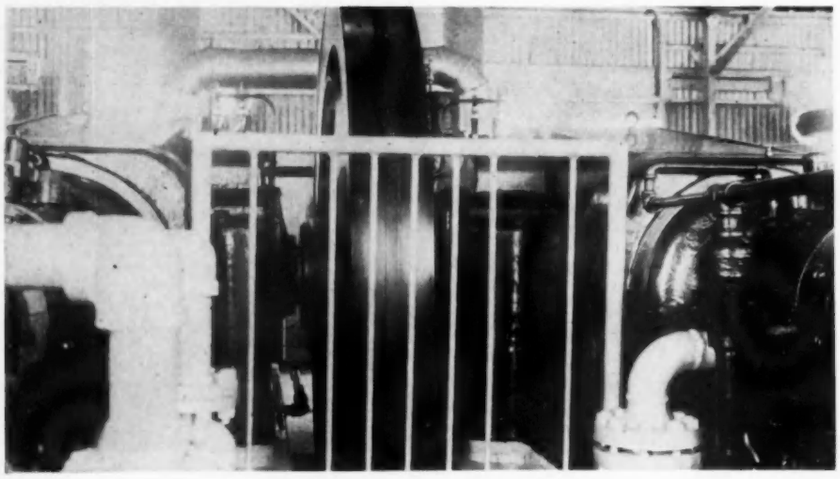
**The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."**

### *1. SAFETY*

## Vertical Apertures Improve Protection

TO PREVENT accidents to employes servicing and operating twin, horizontal repressuring engines, one of the larger companies maintaining repressuring projects installs a substantial guard grille next to the fly-wheel. The guard is made of 2-inch pipe in the form of a rectangle, with its long side horizontal, and filled with rods welded to stand vertically.

The purpose of the vertical bars, instead of horizontal, is to prevent a man from hanging by an arm or leg should he slip and fall. The vertical arrangement allows him to slip quickly to the lower side of the guard far enough removed from the rim of the fly-wheel to prevent contact.

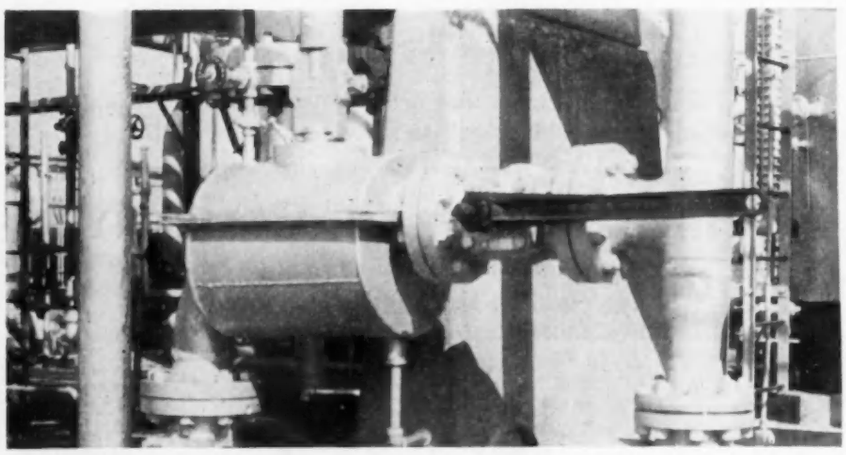


**Heavy rectangle with bars set to prevent entanglement in case of fall against guards offers adequate protection to the flywheel as it automatically fends away from wheel and pit.**

### *2. CONTROL*

## Jackets Prevent Regulator Freezing

REDUCTION of pressure and consequent temperature drop at constrictions within the flow passages of control instruments, resulting in the formation of ice or hydrates in the instrument, may be overcome by enclosing the control in a heating jacket or housing.



**Separable, gasketed cover with steam feed and trapped outlet provide means for steam-heating regulator valve on high-pressure gas line and prevents the formation of hydrate blocks.**

The heating case is made to enclose the valve body, being in two parts and designed to bolt together at the rims of the two sections. Provision for packing off the joint between case and pipe on which the control is mounted prevents leakage.

Heating is supplied by a flow of steam through the upper line into the jacket, condensation being drained away with a trap at the end of the drop leg if steam escape is objectionable, or allowed to flow away as hot water otherwise.

The case for any valve may readily be made up by forming light plate for the sides and by cutting end discs from heavier material, welding being used throughout except at the junction of the two parts of the finished case.

### *3. PIPE LAYING*

## Temporary Seal Bars Exposed Pipe End

TO PREVENT the use of the open end of a pipe line under construction from being used as hideout by rabbits and rodents during the period between the end of one day's work and the start of the next, one construction company always tacks a square of light sheet metal over the open end before quitting for the night.

Use of the square sheet prevents the welding of line onto an end blanked off by a disc fitted within the pipe and tacked there—to be overlooked at the start of the next day's work, as happened on one line being rushed to completion, and which built up a surprising

# THE PIPELINER . . .

Turned corners afford tacking ears for spot welding this stop over open end at close of day's work.

pressure long before the section under test could be filled.

To provide welding at a point away from the end bevelled for the usual pipe junction, the cover plate is formed with two opposite corners turned back at 90 degrees, the apexes of the small triangles thus formed being tacked to the wall of the pipe well clear of the joint welding zone. The light bead or spot weld at the apex of each triangle is easily broken off without use of the torch when resuming pipe line construction.

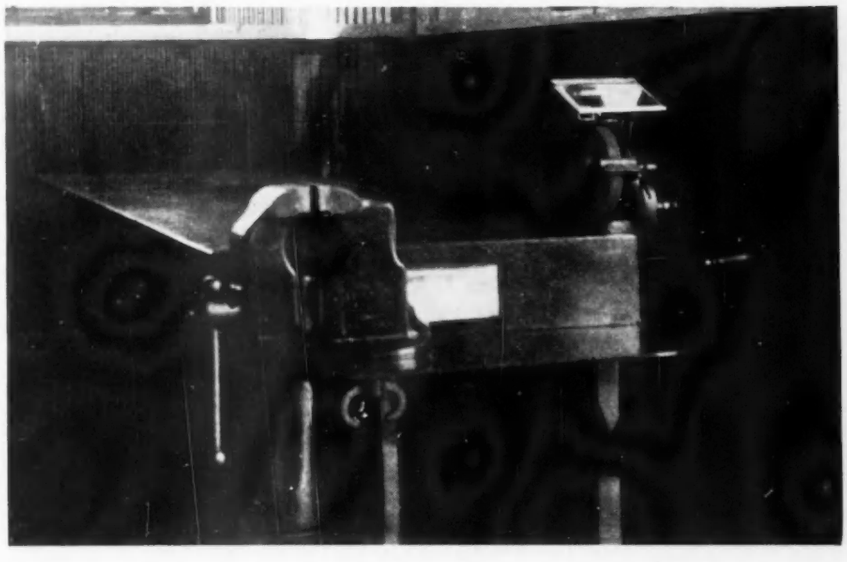
### 4. WORK BENCH

## Steel Surface for Effective Overhaul

A LIGHT weight steel work table can usually be employed to good advantage by operators of plants where light maintenance is done in the building. The table can be made with angle iron legs with a shelf at the convenient distance between the top and floor for laying medium weight tools between operations.

The cover may be made from a single sheet of medium weight tank steel, welded to side pieces and dressed smooth with a grinding wheel. A substantial end shelf attached to the table below the level of the top is a convenient place to clamp a vise for light repairs.

At one corner can be bolted a small hand driven grinding wheel for sharpening edged tools, protected with a slanting pane of safety glass set in a mounting stand.



Welded from steel plate and then ground to smooth surface with portable wheel, this servicing bench carries shelf for vise and may be drilled and tapped for affixing other accessories.

### 5. RECLAMATION

## Motor and Discs Aid Gate Seat Salvaging

WHEN overhauling large gate valves for salvage and reconditioning, it is usually necessary to rework the seat rings, preferably without removing them from the body-casting. Even though the valve may have shown proper tightness on test, refinishing of the seats with a light cut will remove minor blemishes and give a much longer

Forked spindle in electric drill drives dual grinding disc set within gate through wedge opening.

period of satisfactory service after the other work-over is completed.

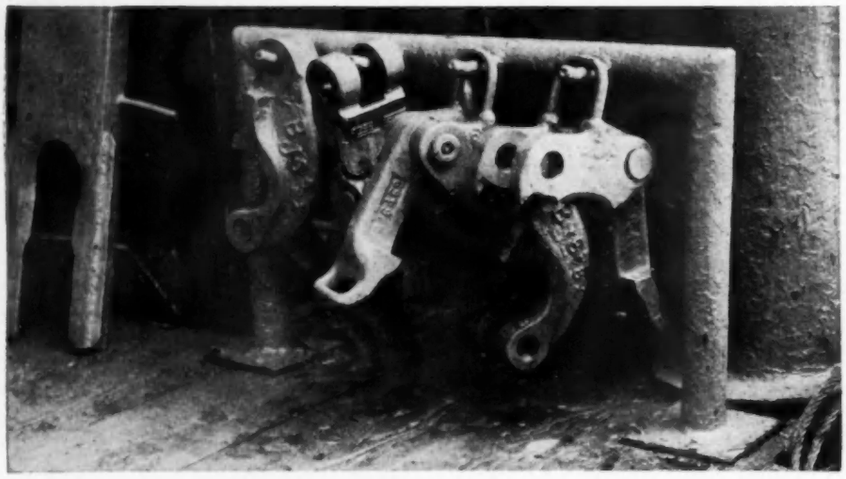
The seats may be reworked by passing a heavy, smooth disc of steel through the space used by the wedge section, so that the disc will rest on the farther of the valve surfaces. An upper locking plate, slightly smaller in diameter than the disc forming the back-up for the grinding surface, is used to hold the abrasive cloth firmly in place.

Two holes through the back of the grinding plate engage the forked spindle of the medium weight electric drill and provide for rotating the device. The disc is revolved at a slow speed, and is shifted laterally to prevent ringing or grooving of the sealing faces.

# PRACTICAL OPERATING *Hints* FOR

### *1. PARTS HANDLING*

## Rack Carries Tong Jaws for Quick Use



**Heavy pins, welded to horizontal rack bar at proper height from floor, enable quick inspection and selection to be made of tong jaws and other interchangeable equipment parts.**

ONE oil company operating drilling barges on the Louisiana Gulf Coast provides special hangers or racks on each derrick floor for keeping elevators and slips of various sizes. As pipes of different sizes are used in many of the wells, and changing tools to fit the various pipe is a frequent occurrence, work is expedited by having a central site for keeping the devices, to eliminate misplacing and to save time of crew in locating proper material.

The racks use 2½-inch pipe, and consist of two 2½-foot uprights and a horizontal member linking the ends, approximately five feet long, with ends of all the pipes beveled at a 45° angle to provide a flush right angle corner. Squared bottoms of the uprights are welded to the center of steel plates about 9 inches square, used as bases for the racks. In the corners of the plates, small holes are drilled to allow nailing or bolting to the wooden derrick floor.

At regular intervals on the horizontal pipe, and on both sides, stubby bars are welded at right angles to the pipe. They are 5 or 6 inches long and ⅝ inch in diameter. The straight rods provide satisfactory pegs for hanging elevators and slips, encouraging men to keep equipment in place where it will be available when needed. The apparatus is fastened to the floor near enough the rotary to permit easy accessibility, but in a site out of the way of workers.

### *2. LUBRICANTS*

## Drum Skid Improves Oil Withdrawals

SKID-MOUNTED racks for holding oil drums are used on the rigs of one large drilling company in Central Louisiana, featuring individual containers for each drum with special facilities for tilting. Each apparatus is easily portable, adapted for loading on trucks when hauling, or for convenient location.

The skids are constructed of 4-inch drill pipe, the two outside sections being about 12 feet long, with short nipples of 4-inch pipe welded to the ends, tilted upward at a 45° angle to facilitate skidding. Near each end, cross members made of 2-inch pipe approximately three feet long tie the sides together rigidly. All superstructure is erected on this skid frame.

Spaced uniformly the length of the frame, five peaked barriers of 2-inch pipe are welded to the base, in the shape of triangles with vertices upward. These partitions separate the rack into four compartments, each designed for one drum. Short nipples of 1-inch pipe are welded to the apex of each support as sockets for hanging the drum platform. This platform has a circular steel bottom, and is equipped with a low rim to hold base of the drum in position, while 18 inches above the platform on one side only, is a curved steel rim describing a 180° arc for bracing the drum. Two short rods are placed in position to be inserted into sockets, to allow tilting when desired by applying pressure to the platform.

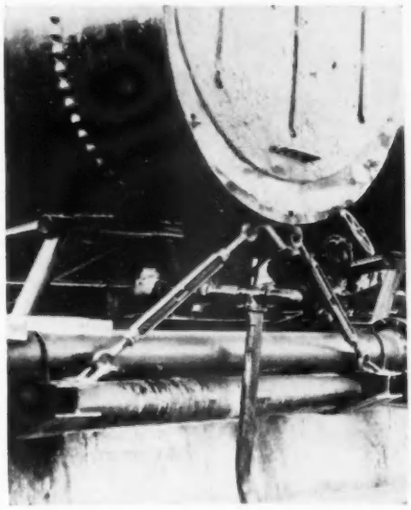
A chain is placed behind each drum to hold it on its platform, stretched tightly across to form the high side when the drum is tilted. Movement of drum is easy as unrestricted motion is provided by the sockets.

**Welded from heavy pipe sections, and with trunnions for carrying pivoted platforms for separate drum mounting, this oil supply skid permits one-man drum handling and saves oils.**

# THE DRILLING RIG

### 3. BOILERS

## Front End Roller Absorbs Expansion



Turnbuckles prevent side travel, as chafing plate and roller on support provide for endwise shift of shell.

WHEN a boiler is mounted on a skid-type base to facilitate hauling and erection, some form of support is provided beneath the stack end of the barrel of the boiler.

Expansion and contraction demands a floating connection, and one company using a large number of drilling boilers builds this support for unrestricted freedom of any movement caused by expansion and contraction.

The support risers are made of heavy pipe with a horizontal cross-member, over which is placed a short nipple of pipe which acts as a roller bearing surface. In addition to the roller sleeve, a flat plate is tacked to the boiler as a cushion and support contact for greater area than if the roller sleeve contacted the boiler itself.

Turnbuckles set in between eyes on the smoke-box ring and the ends of the skids provide means for restraining sidewise motion of the boilers, the turnbuckles moving enough laterally in the eyes to absorb variations in boiler shell length.

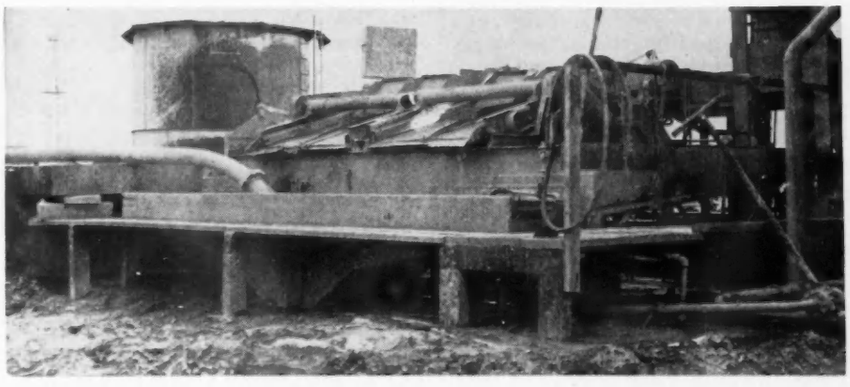
### 4. MUD HANDLING

## Shale Collector Aids Selective Disposal

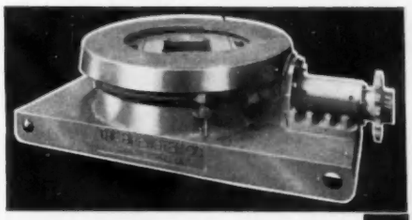
TO SIMPLIFY the disposal of shale from drilling wells in areas where the usual open pit at the end of the mud run is objectionable, one contractor constructs a metal receiver just below the discharge ends of the shaker aprons with the sloping ends delivering material to a pocket in the central portion of the device.

As shale accumulates, it may be jetted through a discharge line into a deep receiving pit located some distance from the well site as provision against wall slumping due to drilling vibration, and then covered with top soil to permit return of the land to cultivation after well completion.

By permitting the hopper to fill, any drilling mud carried over with the cuttings may be overflowed into the usual mud flume, and only the settled cuttings jetted to the disposal pit.



Sloping end sections and deep central portion concentrate cuttings from shale shaker, permitting mud drainage and jet disposal of waste products to convenient burying pit.

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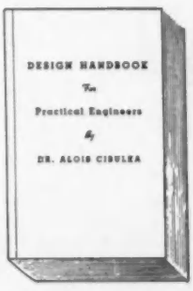


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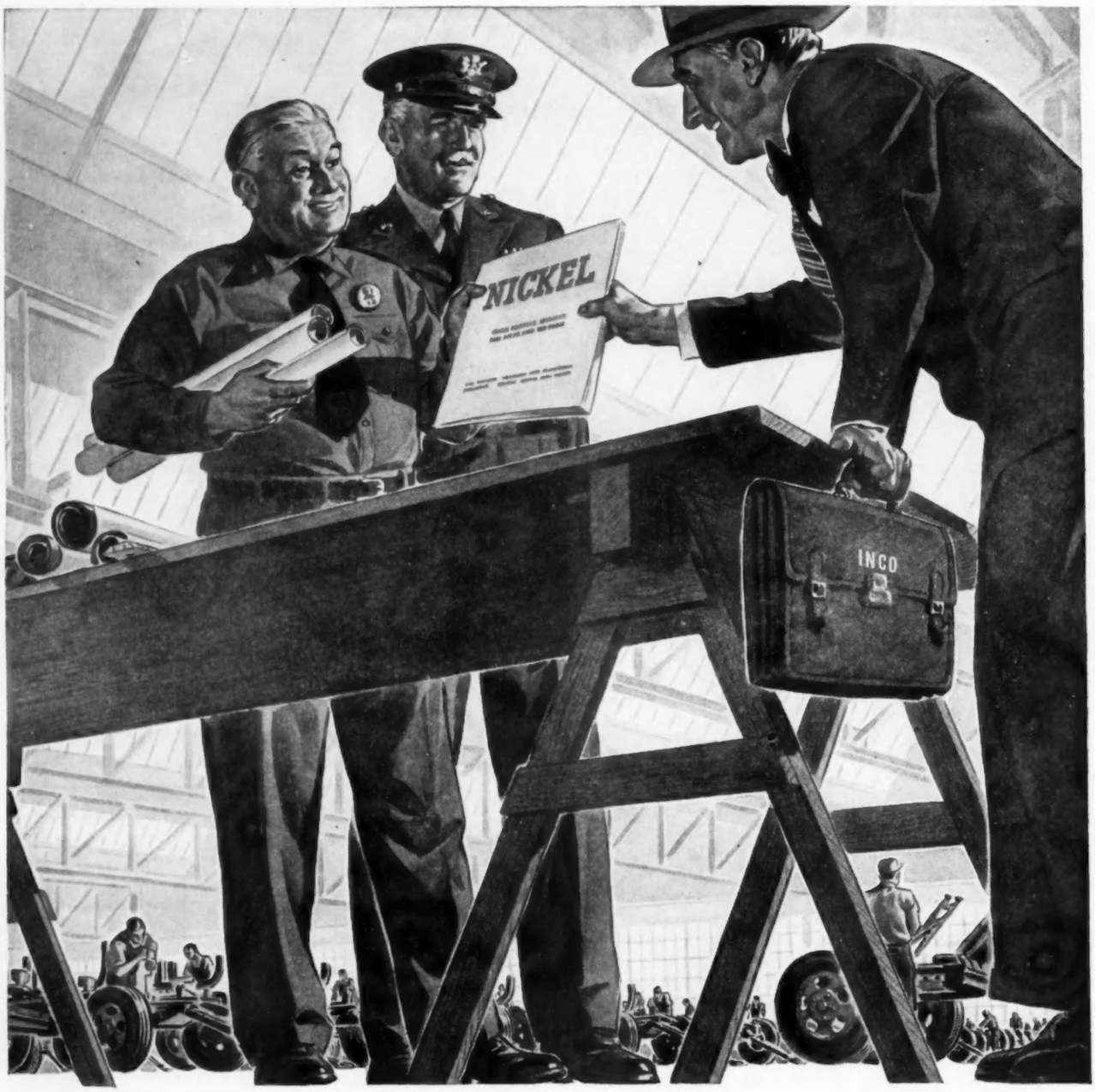


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# States Plan Topping Federal Allocations During June by 150,000 Barrels Daily

For the first half of June, production of crude oil and other petroleum liquids will be approximately 150,000 barrels daily or 4 percent in excess of the output recommended by the petroleum coordinator. This is indicated by the accompanying tabulation of scheduled allowables in the prorated states and the probable course of production in the several unprorated states now yielding flush production. Except in Texas, OPC allocations will be generally adhered to in the prorated states.

In the latter half of the month, the relationship between actual production and recommended output will depend on the order of the Texas Railroad Commission for that period.

The commission's order for the first half of June largely accounts for the prospective overproduction until June 15, authorizing output about 135,000 barrels a day above the allocation from OPC. The commission explained that the state's allowable above the quota for early June was based on purchasers' nominations, but further stated that in the meantime the effect of the prescribed allowables would be observed, for guidance in setting allowables for the latter half of June.

Unprorated Mississippi apparently will produce about 40,000 barrels a day more than its allocation, judging by output during the past month; but Illinois, also without proration, will fall short of supplying recommended production by about 25,000 barrels daily if output continues about the same as during the past four weeks.

### Texas Details Involved

An average net daily allowable of 1,249,788 barrels has been fixed by the Texas Railroad Commission for the first 15 days of June. Shutdown days are June 1, 6, 7, 13 and 14 for fields generally, including those which produce oil necessary to promote the war effort. The regular list of fields exempt because of physical waste remains unchanged.

The net allowable amounted to 126,788 barrels less than was prescribed for the last 16 days of May. With an anticipated underproduction of 5 percent (April base) or 62,489 barrels daily, the net prorated production average drops to 1,186,299 barrels. By adding unprorated natural gasoline and condensate—101,879 barrels daily—the average estimated daily production of prorated and unprorated oils is 1,288,178 barrels.

In announcing the June order last week Commissioner Jerry Sadler said the commission had furnished Washington officials with considerable data on evidence received at the last hearing.

The commission last week had been advised by the Federal Coordinator that production of distillate and condensate should be regulated. "I find," wired Ickes, "as a fact and hereby certify that a detailed analysis of the characteristics of the so-called distillate and condensate produced in Texas establishes that these raw materials are, under present conditions, properly classifiable as 'crude petroleum oils' and the production thereof should therefore be regulated as such."

Sadler announced that proration of those liquids already has been provided for in an order effective July 1, which places cyclying plants under stringent regulations.

A study of changes by districts in the scheduled allowables for the first half of June—the amount assigned for each producing day—indicates radical revisions. West Texas was given an increase of 56,839 barrels as compared with May 16, or an increase of about 25 percent. Southwest Texas was boosted 29,016 barrels or approximately 15 percent. Slight increases were authorized in North Texas and the Panhandle. West Central Texas was reduced approximately 30 percent.

### Field Allocations

Radical changes in various fields included Greta, up from 1747 to 3923 barrels; Heyser, 8667 to 10,192; La Rosa, 1046 to 1865; Tom O'Connor, 9809 to 17,925; Alta Mesa, 985 to 1682; Aransas, down from 6497 to 959; Clara Driscoll South, up from 1904 to 2112; Glen, 1015 to 1685; North Government Wells, 2372 to 3578; South Government Wells, 1150 to 2366; Hoffman, 2296 to 3488; Kelsey, down from 769 to 188; Loma Novia, up from 2212 to 5911; Lopez, 1620 to 2379; Luby, down from 5790 to 1500; Lundell, up from 429 to 1123; Minnie Bock, 1300 to 2060; Plymouth, 8663 to 9495; Saxet, 5455 to 7563; Saxet Frio, 2034 to 5988; Seeligson, 452 to 1005; Seven Sisters, down from 4650 to 4250; Stratton, up from 1969 to 2520; Taft, 683 to 1500; East White Point, 8545 to 11,328.

Anahuac decreased from 18,280 to 12,-

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**Texas Largely Accounts for Allowable Production in Excess of Petroleum Coordinator's Recommendation**

(Barrels daily of crude oil, condensate, and natural gasoline)

| STATE | Recommendation of Petroleum Coordinator for May | Recommendation of Petroleum Coordinator for June | State Allowable Beginning of June | Difference June Allowable from Recommendation | Percent Difference June Allowable from Recommendation |
|---|---|---|---|---|---|
| Arkansas | 74,000 | 75,300 | 75,300 | ..... | ..... |
| California | 673,800 | 691,900 | [1]691,900 | ..... | ..... |
| Kansas | 259,300 | 281,900 | 281,900 | ..... | ..... |
| Louisiana | 298,600 | 311,300 | [2]311,300 | ..... | ..... |
| Michigan | 60,500 | 63,100 | [3]65,400 | + 2,300 | + 3.6 |
| New Mexico | 73,300 | 80,600 | 80,600 | ..... | ..... |
| Oklahoma | 438,500 | 436,600 | 436,600 | ..... | ..... |
| Texas | 960,000 | 1,068,600 | [4]1,200,000 | +131,400 | + 12.2 |
| Total 8 Prorated States | 2,838,000 | 3,009,300 | 3,143,000 | +133,700 | + 4.4 |
| Illinois | 329,200 | 320,800 | 295,700 | — 25,100 | — 7.8 |
| Mississippi | 48,100 | 49,200 | 88,550 | + 39,350 | + 79.9 |
| Total 10 Flush Production States | 3,215,300 | 3,379,300 | 3,527,250 | +147,950 | + 4.3 |
| Other States | 259,200 | 257,000 | ..... | ..... | ..... |
| Total United States | 3,474,500 | 3,636,300 | ..... | ..... | ..... |

[1] Distributed to fields by Conservation Committee of California Oil Producers.

[2] State proration schedule designed to provide production recommended by OPC. Department of Conservation estimated for June 19,000 barrels daily of liquid hydrocarbons other than crude, which left 292,300 barrels crude to be produced. To provide that amount of crude, it was calculated that allowables would have to be scheduled in total amount of 315,300 barrels daily, considering prospective underproduction of 13,000 barrels due to deficient wells and 10,000 due to pipe-line proration. Schedule was worked out which prescribed crude allowable of 315,011 barrels daily, including 234,315 for South and 80,696 for North Louisiana.

[3] No state allowable set for June. Estimated production 65,400 barrels daily.

[4] Daily average allowable of crude oil and other petroleum liquids for first 15 days of June, with 5 shut-down days: June 1, 6, 7, 13, and 14.

OIL IS AMMUNITION ★ KEEP 'EM PRODUCING

638; Bay City, up 1970 to 2400; Blue Ridge, down from 1769 to 771; Clam Lake, up from 85 to 557; Dyersdale, down from 2099 to 1019; Fannett, down from 2068 to 987; Gillock, up from 2795 to 3240; Hardin, from 1962 to 3425; Hastings, from 26,954 to 30,911; Hull, down from 7917 to 4067; Lovell's Lake, up from 4462 to 6263; Magnet, down from 3301 to 2286; Manvel Miocene, up from 1975 to 3116; Manvel Oligocene, from 2722 to 4261; Old Ocean, up from 12,415 to 17,955; Segno Deep, down from 4752 to 2273; North Thompson, down from 2090 to 1020; South Thompson, down from 4970 to 4319; Tomball, down from 13,612 to 12,107; Withers, up from 5994 to 8515.

In East Central Texas, Hawkins was down from 21,180 to 18,000; Long Lake up from 4460 to 5359; Talco, down from 27,065 to 25,000.

In West Texas, Abell was up from 1643 to 2475; North Cowden from 1882 to 8639; South Cowden from 382 to 1758; Johnson from 416 to 1978; Jordan from 1572 to 5858; Kermit from 4635 to 5225; Keystone Colby down from 4833 to 4266; McElroy from 21,571 to 16,973; Means up from 463 to 2100; Penwell from 2087 to 2719; Emperor from 680 to 1469; Foster from 1413 to 6458; Harper from 598 to 2375; Seminole from 2687 to 3736; Slaughter from 19,028 to 26,441, Waddell down from 2304 to 1871; North Ward down from 9506 to 8031; Wasson up from 8307 to 35,616.

The next statewide proration hearing has been scheduled by the Texas Railroad Commission for June 16 at Austin.

In calling for nominations the notice requires that they shall be filed on or before June 12, 1942, "and they shall be definite nominations of requirements for July and as definite a forecast as is possible of requirements for August, September, October, November and December. The oil nominated shall represent the daily average amount of oil in barrels to be produced for purchase from each field.

At a hearing called for June 15 the commission will receive evidence to determine whether or not regulations should be adopted to govern the area surrounding Continental Oil Company's Mueller 1 in the F. Hamilton Survey, Montague County.

Also scheduled for June 15 is a hearing on the South Caesar Field, Bee County, for amendment of rules.

## Central Oklahoma Chapter Of A.P.I. Reorganized

Central Oklahoma Chapter of American Petroleum Institute was reorganized at a meeting at Oklahoma City May 27. The last meeting of the chapter, formerly known as the Oklahoma City chapter, was held March 15, 1939.

Don A. Miller, Phillips Petroleum Company, was elected chairman of the group. Vice chairmen elected were H. O. Harder and Wesley Moore, both of Oklahoma City, and Ed. Stewart, Edmond, Oklahoma. R. F. Schooling, Oklahoma City, was named secretary-treasurer. The next meeting will be held in June.

At the reorganization meeting, Herbert Goodpaster, chairman of the Mid-Continent district, presided, and C. A. Young, divisional secretary, acted as secretary.

## Sadler's Resignation Muddies Texas Politics

The Texas Railroad Commission last week was embroiled in the most bitter political fight Texas politics have seen in years.

It smelled.

Round by round, this is what happened:

Three or four weeks ago Governor Coke Stevenson was told Commissioner Jerry Sadler would resign, was requested (by Commissioners Sadler and Culberson) to appoint James E. Kilday to the vacancy. The governor agreed, saying that when an office-holder was going to war he would be willing to allow him to select his successor.

On Saturday, May 30, Sadler had not resigned. Stevenson talked with him, told Sadler he must decide when he was going. Sadler said he would issue a statement, and later that day told the press that he would not resign until after the election. Seeing this statement, Stevenson dismissed the matter from his mind.

Monday, June 1, was the last day for candidates to file their names for a place on the ballot for the Democratic primary. That night at nine o'clock in Lubbock, Texas, a messenger handed Stevenson Sadler's resignation as the governor concluded a speech. Meanwhile, Kilday, apparently the only prospective candidate who knew that Sadler had resigned, sent in his application for a place on the ticket to fill the unexpired term of Sadler.

Thursday, June 4, Stevenson announced that he had not accepted Sadler's resignation. Whether he had the legal right to accept or reject it was not discussed.

Sadler immediately issued a statement asserting that the Governor had agreed to appoint Kilday, had reaffirmed the agreement May 30. Sadler said that he must report to the army June 17, and declared the office "vacant."

The governor admitted the original agreement, but said that after Sadler did not resign on Saturday, he had thought no more about it. He said that undoubtedly the office would be vacant on June 17, and at that time the Democratic executive committee could meet, place on the ticket the names of all those who wanted to run.

JAMES E. KILDAY

Certain it was that Sadler had resigned, gone into the Army as a first lieutenant (instead of a buck private). Uncertain was the fate of Kilday. Whether he was the only candidate for the office would be determined when the Democratic executive committee holds its regular meeting in Austin on Monday, June 8.

Whether Stevenson would appoint anyone during the interim could not be ascertained.

Kilday, a native of Sabinal, Texas, has been with the Texas Railroad Commission three and one-half years. He was appointed director of the motor transportation division of the commission January, 1939, by Sadler, and the appointment was confirmed by other members of the commission at the time.

As head of the motor transportation division, he had directed and helped regulate common-carrier motor vehicles operating in the state.

Before joining the commission, he practiced law in Houston.

## Change Texas Rule On New Fields

A new scale for fixing allowables in new fields effective June 1, 1942, has been ordered by the Texas Railroad Commission.

It applies only to wells in each new field discovered after the above date and shall apply to such wells for one year after completion of the discovery well, or until more than five wells have been completed. The new scale does not apply to wells receiving a new field allowable as of June 1.

Since February 1, 1942, the commission had a different scale for fixing new pool allowables which applied until the field was six months old or until more than five wells had been drilled.

The old scale and the new are reproduced herewith for comparison.

| OLD SCALE | | NEW SCALE | |
|---|---|---|---|
| Depth Feet | Allowable Barrels | Depth Feet | Allowable Barrels |
| 0-1000 | 40 | 0-1000 | 20 |
| 1000-2000 | 80 | 1000-2000 | 40 |
| 2000-3000 | 120 | 2000-3000 | 60 |
| 3000-4000 | 160 | 3000-4000 | 80 |
| 4000-5000 | 200 | 4000-5000 | 100 |
| 5000-6000 | 240 | 5000-6000 | 120 |
| 6000-7000 | 280 | 6000-7000 | 140 |
| 7000-8000 | 320 | 7000-8000 | 160 |
| 8000-9000 | 360 | 8000-9000 | 180 |
| 9000-10,000 | 400 | 9000-10,000 | 200 |
| 10,000-11,000 | 440 | 10,000-11,000 | 220 |
| 11,000-12,000 | 480 | 11,000-12,000 | 240 |

## More Michigan Oil To Stop at Toledo

Michigan crude oil shipments will be stepped up this month from an average of 6000 to an estimated 15,000 barrels per day by Sohio Pipe Line Company through its Mt. Pleasant to Toledo 8-inch line. Runs may reach 20,000 barrels if plans now considered are carried out to eliminate most of the rail shipment from Reed City field to Bayway and use pipe line to Toledo and a combination of lake tanker and rail from that terminal.

Michigan shipments to Bayway in any event will be reduced this month from an average of 8500 a day to 5500 under an OPC sanctioned plan to spot more Michigan crude at Toledo for use there by Pure Oil Company's refinery.

## Gasoline Withdrawal Heavy for This Season

The industry's inventories of refined products showed no abnormal changes in the week ended May 30, as refinery runs were substantially increased, with the result that stocks of residual fuel oil again were increased, as in the previous week, while ¾ of a million barrels of light fuel oil went to storage in preparation for next winter's use. Stocks of gasoline were drawn upon more heavily than normal, for this season, despite the larger crude runs to stills and larger gasoline production, but the reduction was not an unfavorable development, as the national gasoline inventory is greater than justified by prospective demand. It was not possible to break out data on stocks of the East Coast district, but there was not indicated any alarming withdrawal from storage there, as combined stocks of that region and Texas, Louisiana, and Arkansas showed a decrease of only 448,000 barrels.

Those areas together meanwhile showed an addition of 560,000 barrels of gas oil and distillate fuel to storage and an accumulation of 257,000 barrels of residual fuel oil. They were able to offer these relatively favorable statistics because daily average refinery runs were increased 62,000 barrels, to 1,519,000 daily, representing 63.7 percent of rated capacity.

California's statistics likewise were generally favorable. Runs to stills were 3000 barrels a day lower than in the previous week at 616,000 daily (78.3 percent of capacity), and gasoline stocks were reduced 127,000 barrels to 17,196,000, but 163,000 barrels of gas oil and distillate fuel went to storage and only 12,000 barrels of residual fuel oil came out of storage.

In the Rocky Mountain states, crude runs to stills averaged 90,000 barrels daily, 65.2 percent of capacity, down 2000 from the previous week, and 57,000 barrels of gasoline went to storage, along with 13,000 barrels of residual fuel oil, while there was a withdrawal of 4000 barrels from stocks of gas oil and distillate fuel oil.

In the Appalachian district, runs to stills were increased 7000 barrels to 159,000 daily, 91.4 percent of capacity, and gasoline production increased by 4000 barrels daily, yet 201,000 barrels of that product came from storage, along with 26,000 barrels of gas oil and distillate fuel, while 25,000 barrels of residual fuel oil were added to stocks.

Strong demand continued for all products that could be furnished in the Middle West, as evidenced by the fact there were withdrawals of all major products in the face of a stepping up of refinery runs practically to capacity. The plants of Indiana, Illinois, and Kentucky processed 778,000 barrels of crude daily, which was 66,000 more per day than in the previous week and 99.2 percent of capacity. Gasoline production consequently was 12,000 barrels a day greater than in the previous week. Nevertheless, gasoline stocks were drawn upon to the extent of 669,000 barrels (95,000 daily), and there were withdrawals of 40,000 barrels of gas oil and distillate fuel (over 5000 daily) and 134,000 barrels (19,000 daily) of residual fuel oil from storage.

In Oklahoma, Kansas, and Missouri, runs to stills were practically unchanged at 360,000 daily, 86.1 percent of capacity, but gasoline production was 7000 barrels a day lower, and 41,000 daily came from storage, while there were additions to storage of 117,000 barrels of light fuel oil and 37,000 barrels of heavy.

For the United States as a whole, crude runs to stills averaged 3,522,000 barrels daily in the week ended May 30, up 129,000 from the previous week but 237,000 or 6.3 percent under the 3,759,000 barrels daily processed in the corresponding week last year. The new rate represented 75.2 percent of the refining capacity of the nation. Gasoline production was 62,000 barrels a day greater than in the previous week in totaling 10,478,000 barrels for the 7 days. Stocks of finished and unfinished gasoline decreased 1,679,000 barrels to 95,355,000, but the latter figure was 2,199,000 barrels, or 2.3 percent, above the total for a year earlier. Gas oil and distillate fuel oil in storage increased 770,000 barrels to 31,384,000, but the latter volume was about 4,000,000 barrels or 11.2 percent under that held a year previously. Residual fuel oil stocks rose 186,000 barrels to 79,628,000, but were thereupon 11,742,000 barrels or 12.8 percent smaller than a year before.

U. S. crude oil stocks totaled 253,423,000 barrels May 23, and were about 8,000,000 barrels (3 percent) smaller than a year previously.

### Crude Oil Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

| STATE OR DISTRICT | [1]OPC Allocation in June | PRODUCTION IN WEEK ENDED | |
|---|---|---|---|
| | | May 30 | June 6 |
| Arkansas | 75,300 | 70,800 | 72,700 |
| California | 691,900 | 598,600 | 592,300 |
| Long Beach | ..... | 36,300 | 35,500 |
| Midway-Sunset | ..... | 53,400 | 56,400 |
| Kettleman Hills | ..... | 35,000 | 34,700 |
| Wilmington | ..... | 84,200 | 87,600 |
| Rest of State | ..... | 389,700 | 378,100 |
| Colorado | 7,600 | 7,650 | 7,050 |
| Illinois | 320,800 | 288,100 | 293,100 |
| Salem | ..... | 46,800 | 45,950 |
| Louden | ..... | 50,200 | 50,600 |
| Other New Pools | ..... | 179,500 | 184,400 |
| Old Pools | ..... | 11,600 | 12,150 |
| Indiana | 18,900 | 21,950 | 21,400 |
| Kansas | 281,900 | 256,500 | 218,300 |
| Kentucky | 13,000 | 12,450 | 12,350 |
| Louisiana | 311,300 | 293,800 | 303,000 |
| North Louisiana | ..... | 86,000 | 86,700 |
| South Louisiana | ..... | 207,800 | 216,300 |
| Michigan | 63,100 | 62,200 | 64,450 |
| Mississippi | 49,200 | 83,900 | 82,100 |
| Missouri | ..... | 130 | 130 |
| Montana | 23,400 | 22,250 | 22,700 |
| Nebraska | 4,100 | 3,950 | 3,900 |
| New Mexico | 80,600 | 55,400 | 55,250 |
| New York | 14,900 | 12,750 | 14,850 |
| Ohio | 10,100 | 9,700 | 9,750 |
| Oklahoma | 436,600 | 383,250 | 380,200 |
| Oklahoma City | ..... | 73,950 | 75,000 |
| Seminole Area | ..... | 97,300 | 95,500 |
| Rest of State | ..... | 212,000 | 209,700 |
| Pennsylvania | 51,000 | 53,200 | 54,050 |
| Tennessee | ..... | 30 | 30 |
| Texas | [2]1,068,600 | 1,550,900 | 1,279,700 |
| Upper Gulf Coast | ..... | 324,500 | 242,350 |
| East Texas Field | ..... | 498,700 | 369,050 |
| Rest of Eastern Texas | ..... | 99,600 | 79,250 |
| Lower Gulf Coast | ..... | 100,800 | 86,050 |
| Southwest Texas | ..... | 47,500 | 41,900 |
| South Central Texas | ..... | 17,200 | 16,400 |
| West Texas | ..... | 208,900 | 206,850 |
| North Texas | ..... | 156,300 | 151,050 |
| Panhandle | ..... | 97,400 | 86,800 |
| Utah | ..... | 15 | 15 |
| West Virginia | 17,800 | 10,050 | 10,000 |
| Wyoming | 96,200 | 95,800 | 96,900 |
| Total United States | 3,636,300 | 3,893,375 | 3,594,225 |

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirements for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC allocations. (Details on state allowables published in this issue of The Oil Weekly.)

[2] Actual production of crude oil and other petroleum liquids in Texas expected to average 1,200,000 barrels daily in first 15 days of June, under railroad commission order, taking into consideration 5 shutdown days during the period June 1, 6, 7, 13, and 14.

## Refined Products Markets Continue Strong

Markets for refined products last week were generally strong throughout the country except in the Southwestern refining districts, where large gasoline inventories continued a retarding influence.

In the Middle West and the Upper Mid-Continent, gasoline prices remained firm, after having recovered from the recent sinking spell, in which they had sagged below the government imposed ceilings. Within the past 10 days, gasoline prices have improved in the Chicago district, Oklahoma-Kansas, North Texas, and Western Pennsylvania, and kerosene and light fuel oil prices also have been advanced by some refiners, particularly in the Appalachian district.

On the East Coast, supplies of all products remain scarce, and available materials are readily absorbed, but there is no enthusiasm over business handled, as it all entails loss, with ceilings holding prices below costs.

On the Gulf Coast, the markets remain very dull, being limited largely to transactions involving rail shipments northward, although some relief has been afforded through lifting of products by the Navy, which will stave off shutdowns of some refineries, that have been burdened with full or nearly full storage.

## Two Texas Shutdown Days Influences Drop

Oil production in the United States during the week ended June 6 averaged 3,594,225 barrels daily, 299,150 barrels less than the previous week and 41,975 under recommendation for June by OPC.

Texas dropped 271,200 barrels to 1,279,700 daily, with fields closed two days, whereas they had produced every day in the preceding week.

Kansas declined to 218,300 barrels from 256,500 the week before, California to 592,300 from 598,600, Mississippi to 82,100 from 83,900, and Oklahoma to 380,200 from 383,250.

Increases were recorded as follows: Illinois to 293,100 from 288,100, with new pools responsible, Louisiana to 303,000 from 293,800, with the southern division showing most of the gain, Michigan to 64,450 from 62,200, and Wyoming to 96,900 from 95,800.

## Distribution Plan Stops Cross Hauling

Program has been organized and machinery set in motion to carry out a long-range plan (THE OIL WEEKLY, April 27, 1942) in District 3, as established by OPC, for increasing the movement of petroleum and petroleum products from District 3 to District 1, the latter area being mainly the Eastern Seaboard, and to eliminate cross hauling within District 3.

Ralph K. Davies, deputy coordinator of OPC, issued a directive May 29 to Charles F. Roeser, chairman of the general committee of District 3, requesting that the plan be made effective immediately.

The supplies and distribution subcommittee of the general committee of District 3 has, therefore, sent out copies of the plan to refiners and distributors in the areas involved to bring about full compliance with all the provisions. C. B. Barrett is chairman of the subcommittee.

In order to accomplish the plan's objectives, District 3, which is comprised of Texas, Arkansas, Louisiana, Mississippi, Alabama, and New Mexico, is divided into nine refinery marketing areas. Distributors or marketers will not be permitted to move products that are for consumption within District 3 beyond the boundary lines fixed for the area in which the refinery is located. There is one exception to this rule, however, which involves the ninth area, being the states of Alabama, Mississippi, the major portion of Arkansas and the eastern portion of Louisiana. This area is to be supplied by refineries in the area and by refineries located on the Texas Gulf Coast. This exception was made, in part, due to the few refineries in the area.

The whole plan calls for concentration of movement of products in the north and east. No restriction is placed on movements from District 3 to points in District 2, but shipments from District 2 to District 3 are eliminated. The subcommittee decided, however, that six counties in Northwest Arkansas could not be adequately supplied by refineries in District 3, and were assigned to refineries in Oklahoma which is in District 2.

Based upon sales record made by a designated refinery group in District 3 during March, 1942, and upon data on per-capita consumption by states, a territory has been set aside for interior refinery groups large enough to give the designated refinery group its prorata share of consumption within the district.

The supplies and distribution subcommittee proposes that from time to time it will ascertain volume of sales made within District 3 by each refinery group and recommendations for changes in boundaries of marketing areas will be made when it becomes apparent that changes should be made.

In dividing the district into the nine areas, it was contemplated that the largest portion of any increase in the movement to District 1 would fall largely on refineries in the Houston-Beaumont-Port Arthur area, and not to the Corpus Christi area. As a result, the marketing area assigned to the Corpus Christi-San Antonio area was enlarged to provide for an increase in sales within District 3 for refineries in that area.

Meanwhile, OPC has approved the allocation plan for refinery runs in District 3. Drafted by the district's general committee, the plan calls for the refining committee of the district each month to determine demand for products and allocate it among refineries.

## Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

| ITEM | Crude Oil Prod. | | Runs to Stills | | Crude Stocks | | Gasoline Stocks | | Gas Oil & Distillate Stocks | | Residual Fuel Oil Stocks | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bbls. Day (Add 000) | Week Ended | Bbls. Day (Add 000) | Week Ended | Bbls. (Add 000) | Week Ended | Bbls. (Add 000) | Week Ended | Bbls. (Add 000) | Week Ended | Bbls. (Add 000) | Week Ended |
| **Highs:** | | | | | | | | | | | | |
| 1939 | 3,910 | 8- 5 | 3,650 | 10-21 | 278,607 | 5-26 | 87,769 | 4-22 | 39,562 | 10-28 | 116,237 | 8-26 |
| 1940 | 3,890 | 3-16 | 3,690 | 6-22 | 265,865 | 8-31 | 102,817 | 4-20 | 49,051 | 10-19 | 109,135 | 9-14 |
| 1941 | 4,337 | 11-22 | [4]4,120 | 10-18 | 266,187 | 3-29 | 99,727 | 3-29 | [5]54,983 | 11-15 | 102,448 | 1- 4 |
| 1942 | [4]4,337 | 2- 7 | 3,961 | 1- 3 | 263,208 | 3-28 | [1]107,229 | 3-14 | 49,357 | 1- 3 | 95,857 | 1- 3 |
| **Lows:** | | | | | | | | | | | | |
| 1939 | [3]1,601 | 8-26 | 3,125 | 2-18 | [2]229,127 | 10-21 | 71,152 | 10- 7 | 20,722 | 4-15 | 105,397 | 4- 8 |
| 1940 | 3,335 | 11-30 | 3,370 | 1- 6 | 237,339 | 1-27 | 79,847 | 11- 9 | 23,551 | 4- 6 | 102,344 | 2-10 |
| 1941 | 3,364 | 1-11 | 3,490 | 1-18 | 240,399 | 11-15 | 80,870 | 10- 4 | 28,381 | 4-12 | 92,635 | 7- 5 |
| 1942 | 3,418 | 5- 2 | 3,393 | 5-23 | 244,364 | 1-10 | 92,987 | 1- 3 | 29,240 | 4-25 | 78,826 | 5-16 |
| **Trends in 1942 (Week Ended):** | | | | | | | | | | | | |
| Jan. 3 | 4,038 | ..... | 3,961 | ..... | 244,440 | ..... | 92,987 | ..... | 49,357 | ..... | 95,857 | ..... |
| Jan. 31 | 3,871 | ..... | 3,848 | ..... | 250,740 | ..... | 97,810 | ..... | 40,674 | ..... | 91,189 | ..... |
| Feb. 28 | 4,016 | ..... | 3,675 | ..... | 259,373 | ..... | 105,635 | ..... | 34,547 | ..... | 88,285 | ..... |
| Mar. 28 | 3,820 | ..... | 3,667 | ..... | 263,208 | ..... | 105,624 | ..... | 31,756 | ..... | 83,045 | ..... |
| April 25 | 3,581 | ..... | 3,506 | ..... | 257,073 | ..... | 102,897 | ..... | 29,240 | ..... | 81,107 | ..... |
| May 2 | 3,335 | ..... | 3,441 | ..... | 259,145 | ..... | 101,376 | ..... | 29,638 | ..... | 79,939 | ..... |
| May 9 | 3,544 | ..... | 3,406 | ..... | 255,185 | ..... | 100,650 | ..... | 29,947 | ..... | 80,155 | ..... |
| May 16 | 3,484 | ..... | 3,484 | ..... | 254,202 | ..... | 99,134 | ..... | 30,206 | ..... | 78,826 | ..... |
| May 23 | 3,599 | ..... | 3,393 | ..... | 253,423 | ..... | 97,034 | ..... | 30,614 | ..... | 79,442 | ..... |
| May 30, 1942 | 3,877 | ..... | 3,522 | ..... | ..... | ..... | 95,355 | ..... | 31,384 | ..... | 79,628 | ..... |
| May 30, 1941 | 3,786 | ..... | 3,759 | ..... | [4]261,576 | ..... | 93,156 | ..... | 35,373 | ..... | 91,370 | ..... |
| **Change:** | | | | | | | | | | | | |
| In week | +278 | ..... | +129 | ..... | —779 | ..... | —1,679 | ..... | +770 | ..... | +186 | ..... |
| In year | +91 | ..... | —237 | ..... | —8,153 | ..... | +2,199 | ..... | —3,989 | ..... | —11,742 | ..... |
| In year | +2.4% | ..... | —6.3% | ..... | —3.1% | ..... | +2.3% | ..... | —11.2% | ..... | —12.8% | ..... |

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Stocks, May 24, 1941.

## Humble Will Build Butyl Rubber Plant

Humble Oil & Refining Company last week closed contracts for construction of a butyl rubber plant for the government at an estimated cost of approximately $16,000,000. Upon completion this plant will be leased by the company and will be operated by it under a contract with Rubber Reserve Company, a subsidiary of Reconstruction Finance Corporation, for the supply of large quantities of synthetic rubber of the butyl type.

This arrangement covers the second plant to be operated by this company for the government in connection with the production of synthetic rubber. The first plant, which likewise involved investment by the government of approximately $16,000,000, is for the production of butadiene, which is an ingredient of synthetic rubber of the buna type.

The total investment to be made by both the company and the government in these projects will aggregate approximately $43,000,000. A portion of the investment will be made by the company in the refinery for production of raw materials to be supplied by it in connection with manufacture of butyl rubber and butadiene.

## Arkansas Commission Opens Technical Office at Magnolia

The Arkansas Oil and Gas Commission opened a new technical office at Magnolia, June 1. All reservoir testing equipment, consisting of three completely equipped bottom-hole-pressure trailers, together with sub-surface gauges and calibrating equipment, has been moved from El Dorado to Magnolia. Portable gas meters used in determining operating gas/oil ratios, equipment for the testing of natural gas for its gasoline content, specific gravity and hydrogen sulphide content are also included in the equipment moved to Magnolia.

All field engineering will be handled from the Magnolia office in the future.

Three engineering vacancies were filled by the commission last week. Jack Vestal of Arkadelphia, Arkansas, student at the University of Oklahoma petroleum engineering school, has been employed as a junior engineer; J. R. Harrison of Aransas Pass, Texas, graduate of Texas A. & I. College, as natural gas engineer, and Arthur G. Burki, Pittsburgh, graduate of the University of Pittsburgh, as petroleum engineer. These engineers were employed to fill vacancies caused by men leaving to join the armed forces of the United States.

## 20 Dyersdale Producers Sold for $700,000, Override

First major oil trade of the year on the Texas Gulf Coast was completed last week with H. C. Cockburn announcing sale of his oil producing properties in the Dyersdale field, Harris County, to Frank J. Gravis of San Antonio for $700,000 cash and a one eighth overriding royalty.

The property includes 20 oil producers and 1 gas well on 719 acres of the George W. Burkitt land in the J. Bundick survey. Cockburn still has 300 nondeveloped acres in the field.

# U. S. Field Operations

## Illinois Basin

### Jefferson County Strike Pumping from Aux Vases

Jefferson County pool opener completed; casing set at Wayne County wildcat; casing set at outpost to Rising Sun field, White County; Edwards County wildcat showing for pool opener; casing set at semi-wildcat in Franklin County.

**Jefferson County:** Lewis Production Co.'s Game Farm 1, SW SW SE 21-3s-3e, pumped 153 bbls of oil and 10 of water in 24 hours natural from Aux Vases 2642-62 ft; in later test pumped 70 bbls of oil, 10 bbls of water in 10 hours.

**Wayne County:** Deep Rock's Blackburn 1, C NW NE 30-1s-7e, 4 miles northwest of Fairfield, set casing on McClosky at 3237 ft with pay at 3238-40 ft; will drill deeper into McClosky with cable tools.

**White County:** R. H. McElvain's Poole-Parr 1, C NE NW 13-6s-10e, north outpost to Rising Sun field, recovered 1300 ft free oil on 20-minute drill-stem test of Aux Vases; casing at 2840 ft; 5 other formations carried some saturation.

**Edwards County:** S. C. Yingling's M. Perkins 1, NE SW SW 2-3s-10e, testing Biehl sand 1953-72 ft; nearest production is Albion pool, 3½ miles north.

**Franklin County:** Jack Darnell's Old Ben 1, NE NE 20-5s-2e, ½ mile east Ike Taylor's pool opening Old Ben 1, scheduled to set casing on Aux Vases, total depth 2716 ft, after hour's drill-stem test in which 300 ft of oil and no water recovered. Taylor's discovery, NE NW NE 19-5s-2e, completed in Aux Vases 2699-2707 ft with natural initial of 178 bbls; ¾ mile southwest of discovery J. W. Menhall's Old Ben 1, NW NE NW 25-5s-1e, pumped 39 bbls in 5 hours and pumped off, from Aux Vases 2690-2707 ft.

**Madison County:** M. D. Bryant staked four locations in area of pool-opening Meyer 1, C W½ NE SE 16-3n-6w, completed in Trenton 2344-53 ft with initial 430 in 48 hours.

**First Reports:** There were 35 new operations including 10 wildcats during the week ended June 4, a decline of 18 from previous week in which year's high was set for first reports.

#### Indiana

**Posey County:** Gulf Refining Co.'s Strack 1, C NE NE 30-6s-13w, set casing at 2515 ft on Cypress sand, total depth 2585 ft after plug back from 3028 in St. Louis lime; is wildcat north of Mt. Vernon.

In Bufkin area, ¾ mile from production, Jarvis Brothers' Sander 1, SW SE NW 26-6s-13w, swabbing 8 bbls of oil an hour from McClosky at 2733-43 ft natural.

#### Kentucky

**Union County:** Lindas - Whatley's Kingdon Coal Co. 1, 1-O-19, 4 miles north of Morganfield and 12 miles south of Mt. Vernon, Ind., field, swabbing and cleaning after 30-quart shot in Waltersburg at 1768-84 ft; shows for 50 to 75 bbls a day.

### Results on Industry's Prospecting Fronts

Among 67 wildcats reported completed during the week were 7 oil wells, bringing the year total of new strikes to 147. So far in 1942, wildcat completions number 1225—425 in Texas and 217 in Illinois, the two most active areas. (See table this page.)

**Illinois:** Slight drop in new starts from peak of previous week; one pool opened and several showing.

**East Texas:** Paluxy strike in Wood County has 90-ft sand.

**North Texas:** Extensions due two pools.

**Kansas:** New pool and major extension.

**Oklahoma:** Two new pools loom

**Texas Coast:** Wilcox produces at Livingston, Polk County.

#### ILLINOIS FIELD COMPLETIONS

**Clinton County**—Gulf's White 1, ne ne sw 2-2n-2w, abnd 1276 ft.

**Edwards County**—Magnolia's Keortge 2, c n½ nw nw 5-1n-14w, abnd 3333 ft.

Brookheaven Oil Co.'s Rothrock 1, 240 ft e of nw se ne 6-1n-14w, abnd 3150 ft.

Central Pipe Line Co.'s Gadaw 1, c n½ nw ne 6-1n-14w, McC. 3138-41 ft, 1280 bbls, 3141 ft.

**Fayette County**—H. Luttrell et al's Hollman 1, se se sw 30-5n-3e, Ben. 1891-1901 ft, 68 bbls, 1901 ft.

Carter's Hopper 3-D, ne sw 32-8n-3e, Dev. 3039-41 ft, 147 bbls, 3044 ft.

**Hamilton County**—Ohio's Whitmore 1, sw se se 13-6s-5e, A. V. 3130-38 ft, 75 bbls, td 3305 ft.

J. L. Youngblood's Johnson 2, c w½ ne ne 27-6s-6e, abnd 3110 ft.

Ohio's Hall 1, se sw nw sw 8-6s-7e, salt water disposal, 1539 ft.

**Jasper County**—Pure's Semple Consol. 1, sw sw 9-5n-10e, McC. 2784-2810 ft, 49 bbls, td 2825 ft.

**Macoupin County**—Kermit Reay's Stephen 1, nw sw sw 18-8n-8w, 365-420 ft, 100 gas, 558 ft.

**Wayne County**—Gulf's Weber 2, nw se nw sw 33-1s-6e, McC. 3190-95 ft, 918 bbls, td 3195 ft.

Roach & Voiles' Carleson "B" 1, c w½ nw sw 3-2s-7e, A. V. 3098-3114 ft, pb 3165 ft, 20 bbls, td 3254 ft.

Texas Co.'s Mayberry 1, c n½ nw se 7-3s-6e, McC. 3333-48 ft, 1600 bbls, 3360 ft.

**White County**—Longhorn's Helm 28, se ne ne 22-3s-14w, abnd 2999 ft.

Gulf's Carter 1, ne nw 18-4s-10e, T. S. 2519-26 ft, Weil, 2854-60 ft, McC. 3200-07 ft, 51 bbls, 3230 ft.

Skelly's Barbre A-1, sw ne ne 18-4s-10e, T. S. 2517-26 ft, 2458-66 ft, 386 bbls, 3246 ft.

Tide Water's Binhlecomb 1, ne se se 31-5s-10e, Deg. 2075-83 ft, 4 bbls, td 2115 ft.

W. F. Catlett's Calvert 3, se sw nw 32-5s-10e, abnd 2126 ft.

#### ILLINOIS OLD WELL DEEPENED

**Wabash County**—Smith & Young's Smith 1, c s½ sw nw 36-2n-12w, otd 1450 ft, abnd 2209 ft.

#### ILLINOIS WILDCAT COMPLETIONS

**Clay County Failure**—A. H. Gibson's Valbert 1, nw se 1-2n-6e, abnd 3192 ft.

**Clay County Failure**—Pure's Greenlow 1, sw ne 3-5n-7e, abnd 2923 ft.

**Cumberland County Failure**—McCollom Bros.' Fee 1, nw se nw 26-9n-8w, abnd 450 ft.

**Franklin County Failure**—E. S. Adkins' Old Ben Coal O-1, sw ne ne se 4-6s-2e, abnd 2940 ft.

**Gallatin County Failure**—Delta Drlg.'s Minier 1, ne ne nw 28-8s-9e, pb 2539, abnd 2993 ft.

**Jasper County Failure**—Seaboard Oil Co.'s Toland Comm. 1, se sw se 2-6n-8e, abnd 3228 ft.

**Jasper County Failure**—Kingwood Oil's Meinhart 1, c e½ nw nw 33-8n-10e, abnd 2708 ft.

**Jefferson County Failure**—R. C. Ottenad et al's Cooper 1, c s½ se ne 3-2s-4e, abnd 3058 ft.

**White County Failure**—Ryan Oil Co.'s Stroms 1, c w½ sw nw 9-5s-10e, abnd 3218 ft.

**White County New Field**—R. B. Martin's

## U. S. Drilling Operations in Week Ended June 6, 1942

| STATE | ALL WELLS COMPLETED — THIS WEEK Total | Oil | Gas | Dry | †Miscel. | Total 1942 | Total this Date 1941 | WILDCATS COMPLETED‡ — THIS WEEK Total | Oil | Gas | Dry | Distillate | Total 1942 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | .... | .... | .... | .... | .... | 3 | 1 | .... | .... | .... | .... | .... | 3 |
| Arkansas | 3 | 3 | .... | .... | .... | 60 | 69 | .... | .... | .... | .... | .... | 7 |
| California | 10 | 9 | .... | 1 | .... | 323 | 460 | 1 | .... | .... | 1 | .... | 11 |
| Colorado | .... | .... | .... | .... | .... | 4 | 7 | .... | .... | .... | .... | .... | .... |
| Georgia | .... | .... | .... | .... | .... | 2 | .... | .... | .... | .... | .... | .... | 2 |
| Illinois | 30 | 12 | 1 | 15 | 2 | 770 | 1,395 | 10 | 1 | .... | 9 | .... | 217 |
| Indiana | 12 | 5 | .... | 7 | .... | 178 | 226 | 5 | 1 | .... | 4 | .... | 29 |
| Iowa | .... | .... | .... | .... | .... | 2 | .... | .... | .... | .... | .... | .... | .... |
| Kansas | 32 | 11 | 2 | 17 | 2 | 686 | 894 | 8 | .... | .... | 8 | .... | 159 |
| Kentucky | 2 | .... | .... | 2 | .... | 63 | 125 | 1 | .... | .... | 1 | .... | 8 |
| Louisiana | 25 | 16 | 1 | 8 | .... | 472 | 583 | 1 | .... | .... | 1 | .... | 65 |
| Michigan | 11 | 7 | .... | 4 | .... | 287 | 340 | 3 | .... | .... | 3 | .... | 69 |
| Mississippi | 3 | 1 | .... | 2 | .... | 61 | 77 | .... | .... | .... | .... | .... | 18 |
| Missouri | .... | .... | .... | .... | .... | 15 | 28 | .... | .... | .... | .... | .... | .... |
| Montana | 6 | 5 | 1 | .... | .... | 74 | 81 | .... | .... | .... | .... | .... | .... |
| Nebraska | .... | .... | .... | .... | .... | 24 | 37 | .... | .... | .... | .... | .... | 11 |
| New Mexico | 5 | 3 | .... | 2 | .... | 184 | 150 | .... | .... | .... | .... | .... | 11 |
| New York | 18 | 11 | .... | .... | 7 | 503 | 313 | .... | .... | .... | .... | .... | 1 |
| Ohio | 21 | 6 | 9 | 4 | 2 | 476 | 696 | .... | .... | .... | .... | .... | .... |
| Oklahoma | 29 | 11 | 2 | 11 | 5 | 683 | 882 | 7 | 2 | 1 | 4 | .... | 127 |
| Pennsylvania | 45 | 37 | 5 | 1 | 2 | 1,337 | 1,684 | .... | .... | .... | .... | .... | .... |
| Tennessee | .... | .... | .... | .... | .... | 2 | 8 | .... | .... | .... | .... | .... | .... |
| Texas | 101 | 60 | 3 | 37 | 1 | 2,890 | 4,117 | 31 | 3 | 1 | 27 | .... | 485 |
| West Virginia | 13 | 2 | 8 | 2 | 1 | 308 | 293 | .... | .... | .... | .... | .... | .... |
| Wyoming | 1 | .... | .... | .... | 1 | 34 | 46 | .... | .... | .... | .... | .... | 2 |
| Total this week | 367 | 199 | 32 | 113 | 23 | 9,439 | 12,514 | 67 | 7 | 2 | 58 | .... | 1,225 |
| Total last week | 329 | 196 | 22 | 89 | 22 | 9,072 | 11,909 | 49 | 10 | .... | 39 | .... | 1,158 |
| Total this year | 9,439 | 5,442 | 740 | 2,392 | 865 | ..... | ..... | 1,225 | 147 | 15 | 1,057 | 6 | ..... |

* Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

Behl 1, se se nw 15-8s-9e, Weiler 2482-93 ft, 75 bbls, td 2493 ft.

**ILLINOIS WILDCAT STARTS**

**Clark County**—C. R. Craft's Finney 1, c w½ nw nw 32-9n-14w, dr.

**Clinton County**—M. L. Dorsey's Murphy 1, nw nw sw 16-3n-3w, dr.

**Franklin County**—E. S. Adkins' Morey "M" 1, se sw nw 34-7s-3e, lcn.

**Hamilton County**—B. M. Heath et al's Klemm 1, ne se 35-5s-7e, lcn.

**Macoupin County**—W. R. Holmes' Graham-Kulenkamp 1, nw se sw 7-8n-8w, dr.

**Richland County**—Helmerich & Payne Drlg. Co.'s Stiff Hrs. 1, se ne ne 35-5n-10e, lcn.

Helmerich & Payne's Dietrick 1, c w½ se sw 1-4n-10e, lcn.

**White County**—Jarvis Brothers' Spencer 2, c n½ nw sw 31-4n-11e, lcn.

**INDIANA FIELD COMPLETIONS**

**Gibson County**—L. L. Benoist's Dunn-Potts 1, c se ne 23-1n-10w, abnd 2454 ft.

Kingwood Oil Co.'s B-2, c nw nw 25-1n-10w, McC. 1772-79 ft, 110 bbls, td 1789 ft.

Chas. Beck et al's Wyatt 1, 82-1n-10w, McC. 1777-80 ft, 7 bbls, td 1786 ft.

Muter Oil's Ewing 1(2) don. 99-1n-10w, McC. 1791-93 ft, 167 bbls, td 1801 ft.

**Posey County**—Wabash O & G Co.'s Mumford 1, sw nw ne 31-3s-13w, abnd 3004 ft.

Tide Water et al's Oeth 1, c sw sw 5-7s-12w, A. V. 2619-25 ft, 15 bbls, 2633 ft.

Gulf's Schutte 1, c ne nw 8-7s-12w, abnd 2832 ft.

**INDIANA WILDCAT COMPLETIONS**

**Gibson County Failure**—Cherry & Kidd's Steckler 1, sw ne nw 13-1s-12w, abnd 2368 ft.

**Morgan County Failure**—C. E. Jefferson's Brown 1, nw nw ne 16-13n-1w, abnd 1700 ft.

**Posey County: New Field**—Carter Oil Co.'s Allyn 1, c nw ne 28-6s-14w, Tar Spgs. 2136-45 ft, 10 bbls, td 3010 ft.

**Posey County Failure**—Sun's Welborn 2, sw ne sw 12-7s-12w, abnd 1996 ft.

**Spencer County Failure**—Paul Sacks' Hoffman 1, nw se se 11-7s-7w, abnd 1562 ft.

**INDIANA WILDCAT STARTS**

**Lake County**—Krien Dykema's Brown 1, sw ne ne 22-32n-8w, lcn.

**Posey County**—Walter A. Martin et al's Stallings 1, nw nw se 25-5s-14w, lcn.

**Vanderburg County**—R. L. Bauman's Peoples Saving Bank 1, ne se nw 31-6s-11w, lcn.

**Warrick County**—Ohio Valley Oil Co.'s McCammon 1, ne nw nw 33-7n-8e, lcn.

**KENTUCKY FIELD COMPLETION**

**Daviess County**—Mecca Oil Co.'s Mitchell 2(3), 7-N-29, abnd 1430 ft.

**KENTUCKY WILDCAT COMPLETION**

**Daviess County Failure**—Basin Drlg. Co.'s Anderson 1, 6-P-28, abnd 1856 ft.

# Oklahoma

## Two New Fields Seen in Making

Two new fields in making; complete test made of latest Wilcox sand strike; well in old area opens new Creek County production.

**Pottawatomie County:** Atlantic Refining Co.'s Hamil 1, C NE SW 27-8-3e, on 15-min. test headed oil with strong gas drive for estimate of 35 bbls per hr, from Hunton lime, only lower section of which was tested, above 4829 ft. Well is being deepened to Wilcox. Location is midway between Romulus and Brooksville.

**Kay County:** Skelly Oil Co.'s Gilmore 1, NE NE NW 19-27-1w, in Wilcox sand at 3622 ft. After shot at 3612 ft well made 780 ft mud and oil. Bailing for test with indications pointing to Wilcox pool.

**Creek County:** Shell Oil Co. opened new production in an old area at Seaton 1, SE SE NE 3-14-7e, which completed for 60 bbls oil, 80 water and 9,164,000 gas from Bartlesville at 3118-3169 ft.

**Noble County:** Deep Rock's Schultz 1, NW SW SE 9-22-2e, tested 600 bbls 3½ hrs, through casing, and later flowed 10 bbls in 15 min. Shut in for connections.

**OKLAHOMA FIELD COMPLETIONS**

**Caddo County: Apache**—Gulf's Shurch 1, ne ne se 3-5n-12w, Bromide 3830 ft, pay 3954-70 ft, 120 ft of 5-in 3957 ft, 15 ft perf flow 448.21 bbls, 3/16-in, td 3971 ft.

**Carter County: Tussy**—J. S. Batson's Dorothy 1, ne se nw 5-1s-3w, sand 3161-91 ft, sand 3248-68 ft, pump 220 bbls, td 3350 ft.

**Creek County: Hickory Grove**—Mid-Continent's Bear 3, se se 3-14n-7e, Bartlesville 3131 ft, flow 64 bbls, td 3161 ft.

**Creek County: Glenn**—Gulf's Vowell 35, se nw sw 16-17n-12e, Glenn sand 1427-1582 ft, shot 310 qts, pump 48 bbls, td 1545 ft.

Sinclair Prairie's Berryhill 38, 220 ft s of c sl ne nw 18-17n-12e, Glenn Sand 1400-1562 ft, pb 1567 ft, pump 8 bbls, td 1569 ft.

**Muskogee County: Link**—Link Oil Co.'s Self 5, sec nw 28-15n-15e, Arb. 2459 ft, abnd 2481 ft.

**Okfuskee County: Deaner**—Riverland's Hopkins 1A, nw se sw 11-11n-11e, Wilcox 3539 ft, abnd 3543 ft.

**Oklahoma County: Oklahoma City**—C. C. Peppers' Block 44, Lot 21 1, se sw sw nw 34-12n-3w, Wilcox 6456 ft, shot 320 qts, pump 492 bbls oil and 240 water, td 6535 ft.

**Okmulgee County: Bald Hill**—Pepis' Colbert 12A, se se nw nw 1-15n-14e, Dutcher 1324-41 ft, packer 1333 ft, input repressure well, td 1342 ft.

**Osage County: Hominy**—Robenowitz 1, nw nw se 25-22n-9e, Tyner 2510-74 ft, 275 gals acid, salt water disposal, 2662 ft.

**Osage County: Pearsonia**—Phillips' Water Flood 1, nw se sw 18-27n-8e, sand 1370-1445 ft, salt water disposal, 1535 ft.

**Payne County: East Orlando**—Olean Pet. et al's Lowery 4, se nw sw 12-19n-1w, flow 75 bbls, Hunton 4751 ft.

**Pottawatomie County: Unnamed** — Cities Service et al's Cade 1, sw nw nw 3-8n-3e, Hunton 4775 ft, perf, 500 gals acid, flow 238 bbls oil, ½-in, td 5073 ft.

**Pottawatomie County: St. Louis**—Ed Highfill's Peters 1, ne nw se 28-8n-4e, Sylvan 4031 ft, show oil 3947 ft and 3983 ft, 7000 gals acid, abnd 4033 ft.

**Pottawatomie County: North St. Louis**—Ed Highfill's Varner 1, ne nw ne 28-8n-4e, Hunton 3869 ft, 3000 gals acid, flow 2000 bbls, tubing, td 3894 ft.

**Pottawatomie County: Unnamed**—Jordan & Atlantic's Pecore 1, ne ne se 34-10n-3e, 2nd Wilcox 5410 ft, abnd 5431 ft.

**Seminole County: Sasakwa**—Tate's Fleets-Osborn 2, ne nw se 11-6n-7e, 2nd Calvin 1520 ft, abnd 1538 ft.

**Seminole County: North Little River**—Delaney's Narcome 1, se sw 30-8n-7e, 2nd Wilcox 4375 ft, abnd 4389 ft.

**Seminole County: South Earlsboro**—C. W. Roodhouse's Baxter 1, ne nw 22-9n-5e, Earlsboro 3460 ft, abnd 3551 ft.

**Tulsa County: Red Ford**—E. E. Moore's Lewis 4, c ne ne 21-19n-12e, Burgess 1440 ft, 1.5 gas, td 1443 ft.

**OKLAHOMA OLD WELLS DEEPENED**

**Kiowa County: Hobart**—Phillips' Warner 1, ne ne se 19-7n-17w, otd 1135 ft, Lime 1061-81 ft, abnd 1530 ft.

**Pottawatomie County: St. Louis**—W. A. Clark et al's Standridge 1, se se sw 10-7n-4e, otd 4025 ft, Viola 4108 ft, 3500 gals acid, pumped 70 bbls oil and 20 water, td 4238 ft.

**OKLAHOMA WILDCAT COMPLETIONS**

**Comanche County Failure**—Gar & McCracken's Campbell 1, c se ne 10-2n-10w, Brk. lime 1405-10 ft, show dead oil, top granite 1670 ft, abnd 1690 ft.

**Creek County New Field**—J. E. Crosbie, Inc.'s Dailey 1, se ne nw 12-18n-7e, Top Ls. 1290 ft, Osw. 2366 ft, Skinner 2648 ft, perf 2658-72 ft, 16 bbls oil, 6 water, td 2672 ft.

**Garvin County Failure**—Pure's Price 1, sw sw se 4-3n-1e, lime 3045-65 ft, Belle City 2995 ft, sand stain 3724-32 ft, Congl. zone 3836 ft, lime 4015-65 ft, Viola 4131-45 ft and 4150-60 ft, lime 4436-4470 ft, abnd 4752 ft.

**Lincoln County Failure**—Eason's Erwin 1, ne nw 32-15n-2e, Avant 3010 ft, Hogs. 3590 ft, Lay. 3625-65 ft, Osw. 4365 ft, Bart. 4775 ft, Hunt. 4990 ft, Syl. 5084 ft, Viola 5175 ft, Dolo 5235 ft, 1st Wx. 5302 ft, 2nd Wx. 5417 ft, abnd 5493 ft.

**Lincoln County Failure**—Coralena et al's School 1, sw sw se 36-17n-5e, Hogs. 1183 ft, Ccb. 1463 ft, Osw. 2066 ft, Prue 2158 ft, Pink Lm 2523 ft, Miss. 2718-2889 ft, Viola 2975 ft, 1st Wx. 3937½ ft, abnd 4050 ft.

**McIntosh County: New Field** — Phillips' Checotah 1, c se sw 16-11n-17e, pipe 2007 ft, perf 21 holes 1522-32 ft, 2.278 gas, td 2992 ft.

**Pottawatomie County: New Field**—Mid-Continent et al's Caldwell 1, nw se nw 1-8n-3e, Paw. 1380 ft, Belle City 2475 ft, Hog. 2850 ft, Mayes 4360 ft, Wood 4440 ft, Hunton 4534 ft, sand 5138 ft, 15 bbls oil, 400 water, 35-gr, td 5157 ft.

**OKLAHOMA WILDCAT STARTS**

**Carter County**—Carter's Gardner 1, c sw sw 3-5s-2w, lcn.

**Jefferson County**—Gulf's Edwards 1, c nw ne 35-3s-6w, lcn.

**Seminole County**—Joe Scroggins et al's Patterson 1, nw nw nw 30-6n-7e, dr.

**Payne County**—Okla. Gasoline, Inc.'s Casida 1, c ne se 3-18n-6e, Checkerboard 2217 ft, dr.

**Pottawatomie County**—Ed Highfill et al's Bodkins 1, c nw se 21-8n-4e, rig.

J. R. Sneeden et al's Davis 1, nw ne nw 30-8n-5e, move in rig.

# Kansas

## One New Pool and One Major Extension

One new pool and one major extension. Peace Creek active area.

**Barton County:** New Reagan sand (LaMotte) production has been proved at Helmerich & Payne's Merten 1, NW NW NE 10-19-15w from 3579 ft with more than 25 ft of saturation. Well started filling on swab test. Area is adjacent Otis-Albert sector producing sweet gas, sour gas and oil from same formation.

**McPherson County:** Lindsborg field has 1¼ mi south extension in Viola lime at Dickey Oil Co.'s Rundberg 1, C W½ NW NE 19-17-3w. Well is preparing to complete but tested 1000 ft oil in hole prior to acid between 3358 and 3367 ft.

**KANSAS FIELD COMPLETIONS**

**Butler County: Keighley**—Bennett's Drumm-Bitler 14A, nw nw se 20-26s-8e, Bartlesville 2710 ft, shot 25 qts, pump 25 bbls oil and salt water, td 2751.

**Cowley County: Frog Hollow** — Sinclair Prairie's Gardner 3, nw ne se 16-32s-5e, Bartlesville 3045 ft, shot 40 qts, pump and flow 494 bbls, td 3094.

**Cowley County: Rahn**—Claude Meyers et al's Rahn 1, nw sw ne 13-34s-5e, Kansas City 2602 ft, abnd 2970 ft.

**Jefferson County: McLouth**—McLaughlin's Zachariah 3, c se se 17-9s-20e, Miss. 1435 ft, abnd 1586 ft.

Hatcher & Fisk's Schwinn 1, c se sw 20-9s-20e, sand 1422-32 ft, .5 gas, td 1444 ft.

**Leavenworth County: McLouth**—McLaughlin's Jacobson 1, c sw nw 27-9s-20e, sand 1344-76 ft, .5 gas, td 1382 ft.

**McPherson County: Ritz Canton**—H. M. Hauser et al's Hill 1, c ne se 23-19s-2w, chat 2915 ft, abnd 2964 ft.

**Pawnee County: Unnamed**—Stanolind's Gilkison 1, sw sw sw 15-23s-16w, Arb. 4063 ft, perf, 300 gals acid, flow 192 bbls oil, 192 water, td 4160 ft.

**Phillips County: Ray**—Cities Service's Waldren 1, sw nw se 20-5s-20w, Reagan 3624-34 ft, 1861 bbls, td 3634 ft.

Cities Service's Hansen B-3, sw ne nw 33-5s-20w, Reagan 3534 ft, 1735 bbls, td 3541 ft.

**Reno County: Hendrickson**—Transwestern's Ramsey 1, se sw sw 36-22s-10w, Viola 3686-94 ft, 2000 gals acid, 3000 bbls, td 3702 ft.

**Reno County: Peace Creek-NE**—Cities Service's Hinshaw "C" 1, sw se nw 11-23s-10w, Viola 3789 ft, abnd 3800 ft.

Lion Oil Refg.'s Weideroder 1, sw nw sw 12-23s-10w, Viola 3752-54 ft, 3000 gals acid, 2754 bbls, td 3763 ft.

**Rice County: Smyres**—W. C. McBride's Hill 1, ne sw se 36-19s-6w, Miss. 3373 ft, pay 3392-97 ft, pump 490 bbls, td 3400.

**Rice County: Campbell**—Lauck & Moncrief's Purcell 1, c n½ n½ ne 28-19s-9w, Arb 3284 ft, abnd 3294 ft.

**Rice County: Wenke-Raymond** — Colorado Pet.'s Thompson 2, c e½ e½ sw 17-20s-10w, Lansing 3043 ft, abnd 3150 ft.

**Rooks County: Ray**—Barnett Drlg. Co.'s Michol 1, ne nw nw 6-6s-20w, granite 3537 ft, abnd 3555 ft.

**Russell County: Gorham**—Stanolind's Baier 1, c e½ ne se 35-13s-15w, Arb 3303 ft, 1000 gals acid, 1752 bbls oil, 261 water, td 3317 ft.

**Russell County: Greenvale**—Philp Han's Soukup 3, se nw sw 3-15s-12w, Lansing 2930 ft, pay 2965-66 ft, 10,000 gals acid, 3000 bbls, td 3023 ft.

**Russell County: Forrest Hill**—Cities Service's Anschutz 1, c ne sw 20-15s-12w, Arb. 3342 ft, abnd 3372 ft.

**Russell County: Trapp**—N. Appleman's Anschutz 2, ne sw nw 10-15s-13w, Lansing 3025 ft, 8000 gals acid, 3000 bbls, td 3081 ft.

**Woodson County: Quincy**—O. J. Connell's Fulhage 1, sw sw se 27-25s-14e, small show oil 1461-68 ft, abnd 1506 ft.

**KANSAS OLD WELLS DEEPENED**

**Ellsworth County: Bloomer**—Phillips' Patzner 3, nw sw sw 30-17s-10w, otd 3325 ft, Pre-Cambrian 3488 ft, salt water disposal, td 3488 ft.

**Jefferson County: McLouth** — Hatcher & Fisk's Kimmel 1, c s½ se sw 5-10s-20e, otd 1563 ft, Miss. 1562, abnd 1714 ft.

**KANSAS WILDCAT COMPLETIONS**

**Ellis County Failure**—J. H. Block's Warner 1, ne ne ne 4-11s-18w, Anhy. 1317 ft, Topeka 3005 ft, Lansing 3299 ft, Congl. 3508 ft, Reworked Simpson 3570 ft, Arb. 3597 ft, abnd 3606 ft.

**Ellis County Failure**—N. Appleman's Jant-

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zen 1, sw se 16-12s-16w, Anhy. 1070 ft, Topeka 2825 ft, Lansing 3136 ft, Congl. 3420 ft, Arb. 3448-98 ft, abnd 3498 ft.

**Ellsworth County Failure**—I. W. Murfin et al's Besthorn 1, nw nw se 16-17s-10w, Anhy. 545 ft, Topeka 2650 ft, Lansing 3005 ft, Congl. 3327 ft, Arb. 3355 ft, abnd 3385 ft.

**Marion County Failure** — Westgate-Greenland Oil's Fellingham 1, se ne ne 28-21s-3e, Miss, 2563 ft, Hunton 2860 ft, Viola 2923 ft, Simpson 3010-42 ft, Arb. 3042-73 ft, abnd 3073 ft.

**Norton County Failure**—Stanolind's Steelsmith 1, sw sw sw 28-4s-24w, Anhy. 1992 ft, Lansing 3480 ft, Trace dead oil 3635-43 ft, Base K. C. 3696 ft, Congl. 3824 ft, Arb. 3843 ft, weathered granite 3920 ft, Granite 3928-32 ft, abnd 3932 ft.

**Pawnee County Failure** — Cities Service's Evans 1, ne se sw 18-21s-17w, Anhy. 1075 ft, Hollenberg 1880 ft, Herington 2010 ft, Winfield 2050 ft, Ft. Riley 2150 ft, Florence 2270 ft, Topeka 3119 ft, Lansing 3530 ft, Base K. C. 3796 ft, sand 3892-3901 ft, sand 3950-68 ft, weathered Granite 4001 ft, Granite 4032 ft, abnd 4038 ft.

**Phillips County Failure** — Helmerich & Payne et al's Miller 1, c se nw 11-3s-19w, Anhy. 1590 ft, Topeka 2980 ft, Lans.-K. C. 3208 ft, Arb. 3568 ft, abnd 3630 ft.

**Russell County Failure**—Skelly's Lewis 1, nw nw ne 16-14s-13w, Anhy. 830 ft, Lansing 3020 ft, Base K. C. 3312 ft, Arb. 3347-72 ft, abnd 3372 ft.

### KANSAS WILDCAT STARTS

**Ellis County**—Cromwell & Lewis' McCouley 1, ne ne ne 4-11s-19w, Anhy. 1448 ft, dr.

A. H. Witt's Fee 1, c n½ ne ne 29-14s-19w, cem 12 in. 70 ft.

Gulf's Peterson 1, sw se sw 20-15s-16e, rig.

**Greenwood County**—A. H. Ponath's Defever 1, c se sw 9-28s-13e, dr.

**Marion County**—Roscoe Mendenhall's Holub 1, se se sw 28-18s-4e, dr.

**McPherson County**—Three Way Drlg.'s Slabach 1, nw nw sw 2-20s-5w, lcn.

**Russell County**—A. H. Witt's Fee 1, sw sw ne 3-14s-14w, dr.

Hartman & Blair's Boxberger 1, sw sw ne 4-14s-14w, dr.

## New Mexico

### NEW MEXICO FIELD COMPLETIONS

**Eddy County**—Morton & Elder's Root 4, 760 ft from n and 1980 ft from w 7-17s-30e, flow 164 bbls 7/16-in, shot 405 qts 2655-2861 ft.

Sanders Bros. et al's Evans 4, c ne ne 4-17s-30e, flow 65 bbls 2-in, shot 220 qts 2894-2980 ft, td 3456 ft, pb to 2980 ft.

**Lea County: West Eunice**—Wilson Oil Co.'s State 10, c se sw 13-21s-34e, elev 3654 ft, abnd 3842 ft.

**Lea County: Maljamar**—Maljamar O&G Corp.'s Mitchell 9-B, c ne se 19-17s-32e, flow 120 bbls 2-in natural, 3578-3618 ft, td 3725 ft.

**Lea County: Penrose**—Parker Drl. Co.'s Long 2, nw sw sw 11-22s-37e, elev 3366 ft, salt 1220-2310 ft, abnd 3697 ft.

### NEW MEXICO WILDCAT START

**Eddy County**—Culbertson & Irwin, Inc.-Universal Consolidated Oil Co.'s Hale 1, c sw se 11-19s-30e, machine.

## West Texas

### *Ward County Well Has Delaware Show*

Ward County prospect in Delaware shows oil. Lubbock County wildcat acidizing, and deep test in Lamb County fills depth contract. Ordovician in Sutton County disappointing. Andrews County discovery finaled.

**Ward County:** J. E. Fitzpatrick et al's Pruitt 1, 4 miles northeast Monroe pool, to set pipe then shoot after indicating 50 bbls oil daily on bailing test from Delaware sand 4825-58 ft, elev 2694 ft. Stanolind's Coons 1, east offset its Byrd pool discovery, abandoned 3200 ft.

**Lubbock County:** Stanolind's Stinnett 1, 6 miles southeast of wildcat pumper, showing small amount oil and water from Clear Fork perf 4691-4767 ft and will acidize; plugged back from 7000 ft.

**Andrews County:** Mascho Oil Co.'s University-Sun 1, 2 miles northwest Emma field and producing from deeper Permian section, pumped 178 bbls initial after nitro shot 4440-4514 ft. Requested new pool rating.

**Reagan County:** Ogden and Hawn's University 2-A, sixth consecutive producer for Barnhart pool, flowed 378 bbls oil through ½-in on 7-hr test, acidized 10,000 gallons in Ellenburger 9071-9172 ft.

**Lamb County Wildcat:** Stanolind's Hopping 1, most northerly deep test for Permian Basin and north of granite ridge, was scheduled to run electric log at 8529 ft in brown dolomite, topped near 8350-ft level. Drill-stem test at 8140-8243 ft, elev 3561 ft, yielded 2150 ft sulphur water, with bottom-hole pressure calculated at 3000 pounds.

**Sutton County:** S. B. Roberts et al's Allison 1 tested small show oil and gas at 5368 ft, 5½-in 5348 ft in Ellenburger, topped 5305 ft, elev 2364 ft, and encountered barren dolomite in deepening to 5416 ft. Owners plan to perforate pipe near contact of detrital-Ellenburger, as this wildcat showed considerable free oil through 4000-ft column of water before running pipe.

**Pecos County:** Gulf and L. H. Wentz's Millar 3, northwest offset their Ellenburger oil discovery, cemented 5½-in 4355 ft after drill-stem test 4359-86 ft yielded 130 ft rotary mud and 280 ft oil from Ellenburger, topped 4167 ft, level with discovery. This new test apparently missed the big gas flow found in Millar 2.

### WEST TEXAS FIELD COMPLETIONS

**Andrews County: Emma**—Skelly's University 3-F, sw sw nw sec 42, blk 9, flow 193 bbls ¾-in, acid 4500 gals 4195-4280 ft.

**Andrews County: West Fuhrman** — Seaboard's Thornberry 1-F, c se sw PSL 13, blk A-42, flow 66 bbls 2-in, gas lift, acid 16,000 gals; shot 550 qts 4414-4594 ft.

**Crockett County: Clara Couch**—Humble's Owens 1-F, c ne nw HE&WT 15, blk GG, abnd 2111 ft.

**Crockett County: Soma-Noelke**—M. & M. Production Co.'s Bouscaren 1-B, ne sw se HE&WT 29, blk GG, 57,618,000 gas natural, Yates sand 1456-61 ft, td 2045 ft, pb to 1461 ft.

Soma O & G Synd-Henry Schooler's Noelke 3-C, se ne nw HE&WT 30, blk GG, 50,000,000 gas natural, 1233-96 ft.

**Crockett County: World-Powell**—M. & M. Prod. Co.'s Powell 10-B, 467 ft out nwc EL 62, blk BB, pump 152 bbls, acid 1000 gals 2592-2647 ft.

**Ector County: Foster**—Richmond Drl. Co.'s Maurice 1, 660 ft out swc lse, T&P 32, blk 42, T-2-S, pump 192 bbls, shot 350 qts 4364-4455 ft.

**Ector County: Goldsmith**—Gulf's Goldsmith 389, 440 ft out nec T&P 29, blk 44, T-1-S, flow 501 bbls 2-in, shot 93 qts 4210-52 ft.

**Gaines County: Wasson**—Amon G. Carter's Sharp 6, nw se nw PSL 47, blk AX, flow 817 bbls ¾-in, acid 9000 gals 4872-4975 ft.

Amon Carter & Continental's Willard 5-A, 1980 ft from s and 660 ft from e ls, PSL 39, blk AX, flow 497 bbls ½-in, acid 9000 gals 4860-5020 ft.

**Hockley County: Slaughter** — Honolulu's Frazier 15, nec PSL 10, blk X, flow 1250 bbls 2½-in, acid 10,000 gals 4875-4975 ft.

Honolulu's Slaughter 31-B, sec lab 23, leag 37, Zavalla CSL, flow 1001 bbls 2½-in, acid 10,000 gals 4920-5010 ft.

Humble's Coons 3, 3679 ft from n and 530 ft from w lines PSL 11, blk X, flow 977 bbls cas, acid 13,000 gals perf 4915-5005 ft, td 5015 ft.

Western States Gasoline Corp.'s Frazier 20, nwc PSL 9, blk X, flow 1065 bbls cas, acid 7500 gals 4982-5033 ft.

**Howard County**—Fleming Oil Co.'s Snyder 3-B, nw ne nw T&P 22, blk 30, T-1-S, pump 168 bbls, acid 2000 gals and shot 540 qts 2762-2878 ft, td 2882 ft.

Mid-Continent Pet. Corp.'s Denman 5, ne sw se T&P 10, blk 30, T-1-S, pump 270 bbls, shot 620 qts 2635-2880 ft.

**Pecos County: Abell**—Geo. T. Abell et al's Eaton 1-B, 1650 ft from ne and 990 ft from se lines H&TC 5, blk 3, top Waddell 5835 ft, abnd 5873 ft.

**Pecos County: Fromme**—Cordova Union Oil Corp.'s State-Fee 3-F, Pink Phelps vacancy sur, pump 90 bbls, shot 10 qts 1490-98 ft, td 1502 ft.

**Winkler County: Weiner**—R. Lowe et al's Brown-Altman 3, sw se nw PSL 24, blk B-5, flow 140 bbls 1-in natural, 3024-3154 ft.

J. R. Sharp et al's Halley-Sun 1, ne ne sw PSL 4, blk B-11, flow 154 bbls ¼-in, shot 360 qts 3015-3190 ft, td 3194 ft.

Sun's Halley 1-B, c sw se PSL 4, blk B-11, flow 226 bbls natural, td 3184 ft.

**Yoakum County: Wasson**—American Liberty & Atlantic's Moore 10, c sw nw sec 734, flow 354 bbls, 4.1 percent water, gas lift, acid 10,000 gals 5125-83 ft.

### WEST TEXAS WILDCAT COMPLETIONS

**Andrews County: New Pool**—Mascho Oil Co.'s University-Sun 1, c ne ne sec 27, blk 10, 2 mi nw Emma field, elev 3216 ft, top solid lime 3950 ft, pump 178 bbls 31.9-gr oil, shot 310 qts 4440-4514 ft.

**Crockett County: Failure**—Ungren - Frazier et al's Noelke 1, 2677 ft from n and 1845 ft from e lines sec 54, W. H. B. Lewis sur, abnd 2000 ft.

**Sterling County: Failure**—Gulf's Foster 1-C, c nw nw S.P. Ry 28, blk 12, elev 2298 ft, top Ellenburger 8057 ft, abnd 8117 ft.

**Sutton County: Failure** — Centennial Oil Co.-W. M. Lyle's Wyatt-Cities Service 1, ne ne ne TWNG 4, blk 6, elev 2467 ft, abnd 426 ft.

**Ward County: Failure**—Jones & Lacey's Carr 1, 330 ft from nw line of T. F. Hardeman sur and 50 ft ne Pecos River, abnd 500 ft.

### WEST TEXAS WILDCAT STARTS

**Cochran County**—John J. Redfern Jr. et al's Wright 1, 660 ft out nwc lab 2, leag 95, Mills CSL, lcn.

**Howard County**—Cosden Pet. Corp.'s Scott 1, se se se W&NW 59, blk 29, lcn.

## North Texas

### *Extensions Pending in Two Clay County Pools*

Jack County oil discovery in Marble Falls sandstone to be cased for completion, and workover operations have failed to revive production in Post Oak pool discovery. Extensions pending in two Clay County pools.

**Jack County:** Joe A. Worsham et al's Hensley 1, Thomas Martinez Survey and 2 miles southwest of the Worsham-Steed 4716-ft pool discovery, filled surface pits with oil and lodged tools before the flow could be placed under control. Production from top section of Marble Falls at 5295-97 ft. Gas volume estimated 2,000,000 ft daily. Taubert-McKee and Sinclair Prairie's Boyd 1, recent discovery that developed water after flowing oil from Ellenburger, continued to show water after perforating liner and acidizing 6421-31 ft, having plugged back from 6435 to 6432 ft.

**Clay County:** Continental's Spring 3, northwest extension for Spring 2-well pool, was swabbing to try for natural flow with 2600 ft oil in hole from saturated lime 5646-61 ft in Bend, topped 5606 ft. Gulf's Worsham-Spring 7, northwest extension for Worsham sector of Ringgold pool, resumed coring after testing show gas 5488 ft in Bend, topped 5473 ft, 5 ft low to nearest producer. Shell's H. Henderson 22-C, fourth deep test for the company's Antelope multi-pay pool, halted in dry Ellenburger 6056-86 ft to run pipe for completion in Mississippian.

### NORTH TEXAS FIELD COMPLETIONS

**Archer County**—W. E. Prod. Co.'s Anderson 1, 660 ft out nec blk 8, G. P. Meade subdiv, pump 67 bbls, sand 1452-62 ft.

**Clay County**—Akin-Dimock-Costley's Patrick 1-D, 990 ft from s and 330 ft from w of e-114-ac blk 82, Byers subdiv, abnd 1224 ft.

Johnson & Kouri's Taylor 5-A, blk 45, Bacon subdiv, pump 10 bbls 1140-45 ft, td 1147 ft.

**Wichita County**—S. H. Walton et al's Coleman 28, lot 1, H&GN sec 23, abnd 605 ft.

**Wichita County: K-M-A Ellenburger**—Deep Rock Oil Corp.'s Hamilton 2-E, M. L. Gahagan sur, flow 157 bbls, acid 6000 gals, Ellenburger 4254-4300 ft.

Sunray Oil Co.'s Mangold 15-E, 330 ft out sec blk 39, P. Castleman sur, flow 1320 bbls natural 1-in, Ellenburger 4244-4321 ft.

Mul-Berry Oil Co.'s Bradley 1-E, 330 ft from s line lse and 208 ft e No. 1 Gahagan sur, flow 554 bbls ½-in, acid 1000 gals 4198-4310 ft.

### NORTH TEXAS WILDCAT COMPLETIONS

**Archer County: Failure** — Young-Kimbell-Bohner's Harris 1, 330 ft out nwc e-40 of

n-80-ac blk 60, J. W. Harris sur, abnd 1384 ft.

**Clay County: Failures**—L. T. Burns et al's Edrington 1, 1320 ft from w and 6777 ft from s lines Thos. Toby sur A-694, abnd 1440 ft.

L. T. Burns et al's Edrington 2, C. H. Stearne sur A-872, abnd 1439 ft.

F. H. Gohlke et al's Householder 2-B, 330 ft out swc n½ blk 30, Byers subdiv, abnd 1849 ft.

Stayton Oil Co.'s Turner 2, 1137 ft w and 1318 ft s of nec blk 55, Specht-McCutchen sur, abnd 1209 ft.

**Denton County: Failure**—H. M. Reed Gas Co.'s Waide 1, 865 ft out swc of e-114¾-ac tr, J. Chism sur A-278, abnd schist 1948-83 ft.

**Throckmorton County: Failure**—Jimmie C. Rogers et al's Timmons 1, nwc s½ TE&L 2189, abnd 2012 ft.

### NORTH TEXAS WILDCAT STARTS

**Archer County**—Morgan & Turner's G. B. Hamilton 1-A, 2358 ft from e and 1389 ft from n lines sec 1, Crawford subdiv of I. Holeman sur A-162, lcn.

**Jack County**—Rathke Oil Co.'s Schnocke 1, 457 ft from n and 477 ft from e lines of A. Schnocke sur, lcn 4800-ft test.

**Montague County**—Benson Bros. et al's Dr. D. C. Riley 1-S, 72 ft southwest of 7204-ft failure, C. Ellis sur A-1146, lcn shallow test.

Rogers Bros. Drl. Co.'s Schenk 1, 330 ft from w and 1901 ft from n lines of S. Dunham sur A-196, lcn 3800-ft test.

## West Central Texas

### *Stephens County Well Has Marble Falls Oil*

Northern Stephens County deep pool records first oil production from Marble Falls. Deep failures in King and Taylor counties. Small gas discovery in Coleman County.

**Stephens County:** Texas Pacific Coal & Oil Co.-Sinclair Prairie's Donnell 1-A, southwest offset to Donnell pool's 4215-ft oil discovery in Mississippian, flowed 300 to 500 bbls oil natural daily from perforations 3940-50 ft, having plugged back from hole full water 4417-18 ft in Mississippian, topped 4404 ft, elev 1080 ft. Oil production from sand section in Marble Falls at 3933-46 ft, being lower than the discovery, which passed up prolific flow gas same zone. Christie Bros.' Donnell 1, northeast offset their discovery, preparing to perforate Marble Falls after failing to make producer in Mississippian 4335-75 ft, elev 1072 ft.

**Deep Failures:** Mid-Continent's Burnett 1, southeastern King County, abandoned in Ellenburger 6180 ft. In Taylor County, J. C. Hunter et al's High 1, northwest offset to 3393-ft Palo Pinto lime pumper in Lake Kirby pool, junked at 4690 ft without completing test of Mississippian lime, topped 4648 ft.

**Coleman County:** Eastland Oil Co.'s O'Hair 1, Casper Simon Survey 716, topped Ellenburger 3305 ft, drilling dry lime 3340 ft.

### WEST CENTRAL TEXAS FIELD COMPLETIONS

**Brown County**—R. M. Ragsdale et al's Richardson 1, 1977 ft from n and 700 ft from w lines J. L. Phinn sur, 300,000 ft gas, lime 1102-19 ft.

E. H. R. Sabens et al's Howell 1, Jos. M. Harris sur 784, abnd 1236 ft.

**Coleman County**—Anzac Oil Corp. et al's Morris 1-T, L. H. McNeil sur 284, pump 34 bbls oil, plus 40% water, sand 2035-58 ft, td 2143 ft, pb 2063 ft.

**Shackelford County**—Hickok & Harry Reynolds' Nail 5-C, ET 133, pump 212 bbls, acid 1000 gals 1607-12 ft.

### WEST CENTRAL TEXAS OLD WELLS DEEPENED

**Taylor County: Merkel**—Fain-McGaha Oil Corp.'s Perry 2, nec tr, blk 5, Grines CSL, elev 1795 ft, otd 2611 ft, pump 136 bbls acid 1500 gals 2606-20 ft, td 2637 ft.

### WEST CENTRAL TEXAS WILDCAT COMPLETIONS

**Callahan County: Failure**—Francisco & Miles' Isenhower 1, 1100 ft from s and 1840 ft from e line TE&L 2978, elev 1673 ft, abnd 667 ft.

T. S. Stanfield et al's Hart 1, 750 ft from e and 1050 ft from n lines sw D&DA 16, abnd 848 ft.

**Coleman County: Gas Discovery**—Jas. C. Ellis-Fred J. Estes' Bridges 1, 97-ac tr, ET 107, 1¾ mi se Talpa, elev 1955 ft, Bend 3579 ft, 1,519,000 gas, open, 980 lbs rp, nitro shots in Strawn 3293-3330 and 3385-3410 ft, td 3656 ft, pb to 3415 ft.

**Jones County: Failure**—Ungren-Frazier et al's Blount-Haynes 1, 2090 ft from s and 330 ft from e lines 345-ac tr, Henry Millard sur 243, elev 1655 ft, abnd 2008 ft.

### WEST CENTRAL TEXAS WILDCAT STARTS

**Bosque County**—C. F. Carter et al's Berry 1, 2369 ft from n and 1769 ft from e lines of Hugh H. Calvert sur Pat 3-850, lcn.

**Callahan County**—A. C. Moore et al's C. B. Snyder 1, ne ne s½ BBB&C 144, lcn.

**Shackelford County**—R. H. Roark et al's W. H. Green 1-49, c ne sw T&P 49, blk 12, lcn.

### TEXAS PANHANDLE FIELD COMPLETIONS

**Gray County**—Phillips' Baer-Pan 10-B, I&GN 125, blk 3, pump 76 bbls oil and 6 bbls water, shot 270 qts 3240-92 ft, td 3297 ft.

**Hutchinson County**—Continental's Sanford 3-D, H&TC 77, blk 46, pump 171 bbls, lime 2820-28 ft.

## East Texas

### *Wood County Strike Is Fourth in Paluxy*

Fourth Paluxy sand strike for East Texas Woodbine Basin assured when Black Oak prospect, north central Wood County, encounters 90 ft of oil pay before reaching water level. Additional development scheduled for area, and royalty trading attains large proportions.

**Wood County:** Amerada Petroleum Corp.'s C. B. Kennemer 1, 660 ft out of northwest corner Jos. Knight Survey, and 8 miles west of Winnsboro, cemented 5½-in pipe on bottom at 6384 ft, and is scheduled to perforate June 7 for initial test of unusually thick oil pay in Paluxy series, topped 6253 ft, elev


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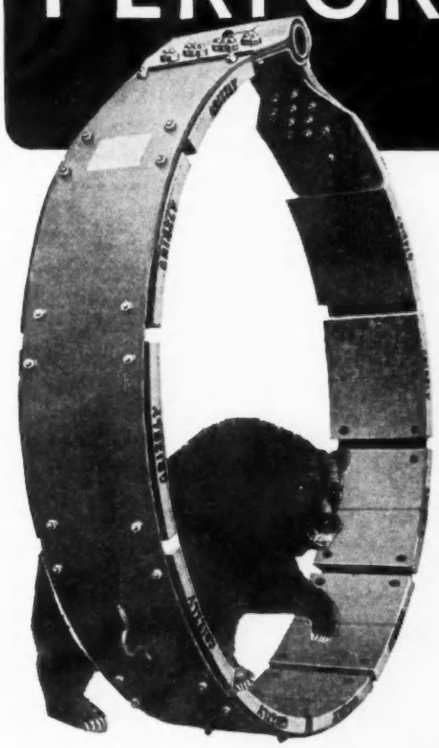

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453 ft. First oil sand was logged at 6264-84 ft followed by streaks shale and sandy-shale to 6298 ft, being top of second sand, which continued to 6355 ft. Broken pay, with shale breaks, continued to 6362 ft, and electric log indicated water at 6366-82 ft, then shale to 6384 ft, total depth. The first 20-ft pay section was pronounced extremely porous and densely saturated, while core analysis indicates it may yield above 35 gravity oil. Amerada has in excess of 3000 acres on top of its Black Oak prospect, including acreage retained to the north and northwest of its Lloyd 1, a 6506-ft failure 2¼ miles south by east of the pending discovery that entered Paluxy at 6483 ft and found water at 6487 ft, elev 444 ft. Additional subsurface control is supplied by Geo. Strake et al's Farrier 1, 3¾ miles west of south of Kennemer 1, and this 6505-ft failure entered Georgetown lime at 4960 ft, and Paluxy series at 6110 ft, elev 397 ft, being 84 ft and 87 ft high, respectively, when correlated with the latest prospect for the area.

Jerry Hawkins et al, owners of a 134-acre lease on the J. M. Clark fee, Berry Smith Survey, have authorized a test to be several locations northeast of Kennemer 1. Magnolia and Ryan Consolidated Petroleum Corporation each have large leases to the southeast, while General American Oil Company has two leases within the southwest portion of the discovery block.

Production from Paluxy heretofore has been confined to the Talco and Sulphur Bluff fault-line fields, which yield low-gravity oil with large asphalt content, and prolific gas-distillate output from 5800-ft sand at Chapel Hill. Amerada's Black Oak prospect is 25 miles northwest of Hawkins, nearest pipe line for the handling of asphalt crude.

**Deep Prospects:** Humble's Curtiss 1, Cherokee County, was drilling shaly-lime 8150 ft, having entered first Glen Rose at 7935 ft. In Hunt County, American Liberty Oil Co.'s McNatt 1, was attempting to free stuck drill pipe at 6490 ft. In Henderson County, Texas Co.'s Brown 1 was drilling 9530 ft.

**Cass County:** C. C. Gilger's Grogan 1, John Watson Survey, Kildare field, was given new gauge of 216 bbls per day, 41-gravity, ¼-in, 876 pounds casing pressure, 350 tubing; perforations 6004-12 ft in Gloyd zone of Glen Rose. Gilger started Cass County School Land 1, Watson Survey, west offset; Phillips Petroleum Co. was drilling at 2320 ft at Benefield and Singleton 1, Wanhope Survey, same field; and Earl Hollandsworth spudded Benefield and Singleton 1, same survey.

**EAST TEXAS FIELD COMPLETIONS**

**East Texas Field: Longview Area**—T. E. Phillips et al's Dunbar 1, 660 ft out sec tr, Jas. Price sur, abnd water sand 3650-65 ft.

**Navarro County: Corsicana Powell**—Stroube & Stroube's Cerf 1, 330 ft from s and 990 ft from e ls, Jas. Smith sur, pump 25 bbls oil, 475 bbls water, Woodbine perf 2898-2901 ft, td 3164 ft.

**Wood County: Hawkins**—Humble's Crisman 5, 151.8-ac lse, J. Pollock sur, flow 229 bbls ¼-in, per 4838-50 and 4791-4800 ft, td 4862 ft.

Humble's Green 3-B, 160.22-ac lse, H. E. Watson sur, flow 454 bbls ¼-in, perf 4610-13 and 4616-22 ft, td 4747 ft.

Humble's E. W. Moore 2-B, 67.71-ac lse, J. Pollock sur, flow 261 bbls ¼-in, perf 4506-10 and 4529-32 ft, td 4600 ft.

Humble's Ponder 3-A, 467 ft out swc 81.44-ac lse, J. Pollock sur, flow 425 bbls ¼-in, perf 4770-75, 4847-57 and 4876-82 ft, td 4891 ft.

**EAST TEXAS WILDCAT COMPLETIONS**

**Kaufman County: Failure**—Brown-Hancock Oil Co.'s Warren 1, 163-ac tr, J. C. Moses sur, elev 456 ft, Austin chalk 1331-1735 ft, Woodbine 2410 ft, abnd 3010 ft.

**Limestone County: Failure**—Texas Co.'s Keeling 1, 1980 ft from w and 880 ft from n line 3674-ac tr, A. Whitaker sur A-568, 6 mi sw Coolidge, elev 546 ft, Smackover lime 5715 ft, abnd schist 6018 ft.

**Upshur County: Failure**—R. W. Burnett et al's Reynolds 1, 660 ft out nec 52.67-ac lse, Ira Stephenson sur, elev 403 ft, Woodbine 3839 ft, abnd 3922 ft.

**Wood County: Failure**—Arthur B. Klemm et al's Ballard 1, 660 ft out swc 118-ac tr, Wm. T. Marshall sur, elev 438 ft, top Pecan 2620 ft, abnd 4610 ft.

**EAST TEXAS DRY HOLE DEEPENED**

**Wood County: Failure**—J. Papadakis et al's (was Fred Strang) Old 1, 467 ft from s and 644 ft from w of 317-ac tr, J. R. Smith sur, elev 392 ft, otd 5301 ft, top Woodbine water sand 5528 ft, abnd 6211 ft.

**EAST TEXAS WILDCAT START**

**Upshur County**—T. W. Lee et al's Briggs 1, 660 ft from n and 1415 ft from w lines 215-ac tr, J. B. Davenport sur, 2 mi n Wilkins, rur.


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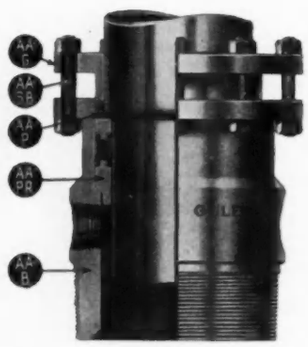

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## Southwest Texas

### *Two New Wilcox Fields in Prospect*

Two new Wilcox sand fields were being opened in Sothwest Texas, as Jackson-Frio sands were being uncovered in other field and wildcat wells in the area.

**Wilson County:** Holland Oil Co.'s Boysen 1, Poth prospect, flowed 26.8-gr oil from perf at 4190-96 ft, water broke in from above, squeezed, retesting at same level.

**Fayette County:** Continental's Gabitsch 1, Cistern prospect, perf at several levels between 1700 and 2900 ft in Wilcox, all recovered fresh water with some oil. Likely will be completed as gas well in Wilcox topped at 2808 ft.

**Webb County:** Magnolia's DCRC 1, Lge 4, 16 mi sw Freer, perf 1953-58 ft and 1962-68 ft in Mirando sand, pumped 15 bbls 21-gr oil, opening new field.

**Bee County:** Rowe & McBride's White 1, Nowland sur, 4 mi nw Tynan, cored first Vicksburg sand 4198-4202 ft, test recovered 200 ft oily mud and salt water, 800 ft salt water, 2 percent oil, in 15 min; coring ahead.

**Calhoun County:** Sinclair Prairie's Bickford 1, outpost deep test Port Lavaca, showed salt water in several new sands below 8000 ft; testing.

**Kleberg County:** Humble's King Cabeza 1, ne outpost Seeligson field, cored new sand series 4637-4701 ft, several tests recovered oil, last 4690-4703 ft, salt water, drilling below 5100 ft.

**Starr County:** Sun's Frost 2-A, Por 96, 13 mi e Rio Grande City, on pump, 45 bbls day, perf 4184-91 ft in Frio.

**SOUTHWEST TEXAS FIELD COMPLETIONS**

**Duval County: Casa Blanca**—Adelon Oil Corp.'s Martin 3-D, sur 230, pumped 27 bbls 21-gr, gas/oil ratio 2/1, sand 1110 ft, 5½-in 1110 ft, td 1145 ft.

**Jim Hogg County: Colorado**—Humble's King-Colorado 69-B, Las Moretas gr, 148.88 bbls 46.5-gr, 3/16-in ch, 240 lbs tp, 420 lbs cp, gas/oil ratio 300/1, sand 3102 ft, td 3116 ft.

Sun's East 1-C, Las Moretas gr, 167.93 bbls 47.5-gr, 3/16-in, 300 lbs tp, 540 lbs cp, gas/oil ratio 320/1, sand 3014 ft, td 3023 ft.

**Starr County: Rincon**—Continental's Slick 73-B, sec 485, 165 bbls 40.5-gr, 3/16-in, 1000 lbs tp, 1320 lbs cp, gas/oil ratio 510/1, perf 4097-4105 ft, td 4238 ft.

**Starr County: Yturria**—Sun's Garcia 1-B, por 100, perf 4257-59 ft in new sand, flow 18 bbls oil, 68 saltwater, 5/32-in, 925 lbs tp, 1375 lbs cp, gas/oil ratio 1698/1, temp abnd, may rework later, td 4337 ft.

**SOUTHWEST TEXAS WILDCAT COMPLETIONS**

**Duval County: Failure**—Bridwell's A. Reyes 1, sec 513, 9 mi e Freer, Gov't. Wells 3204 ft, Kreis 3485 ft, abnd 4100 ft.

**Jim Hogg County: Failure**—Sal Viejo Oil Co.'s I. V. Cuellar 1, blk 50, sec 578, 5 mi ne Manila, abnd 3210 ft.

**Starr County: Failure**—Syndicate Oil Corp.'s Y. Sanchez 1, lot 3, blk A, por 75, 2 mi n Rio Grande City, abnd 1014 ft.

**SOUTHWEST TEXAS WILDCAT STARTS**

**Duval County**—Mudge Oil Co.'s Hagist 1, center s l L. G. Brown sur No. 4, 2 mi ne Eagle Hill field, 3000-ft test.

**Webb County**—H. L. Porter's Z. Villareal 1, center blk 9, tr B, Borrego gr, 9 mi s Aguilares, 2000-ft test.

**Zapata County**—Bob Barker's A. M. Bruni 1, blk 22, Blas Uribe gr, nw por of county, lcn.

**LOWER TEXAS COAST COMPLETIONS**

**Bee County: Thompson**—F. W. Shield's Heard 2, Roach sur, nw outpost, abnd 5510 ft.

**Jackson County: Lolita**—Shell's Mitchell 2, Austin Lge, 114.39 bbls 36-gr, ⅛-in, 525 lbs tp, 775 lbs cp, gas/oil ratio 260/1, perf 5280-90 ft, td 5300 ft.

**Jackson County: Maubro**—Humble's Drushel 6, blk 8, 176.6 bbls 24.8-gr, ¼-in, 180 lbs tp, 730 lbs cp, gas/oil ratio 134/1, sand 5212 ft, 5½-in, 5202½ ft, td 5233 ft.

**Jackson County: N. LaWard**—Gulf's Pickering 3, blk 26, 143.28 bbls 26-gr, ⅛-in, 550

lbs tp, 500 lbs cp, gas/oil ratio 212/1, sand 5215 ft, 5½-in, 5205 ft, td 5222 ft.

Stanolind's Johnson 1, P. Scott sur, 90 bbls 26-gr, ¼-in, 440 lbs tp, 700 lbs cp, gas/oil ratio 250/1, perf 5215-24 ft, td 5225 ft.

**Jackson County: West Ranch**—Magnolia's West 220-A, R. Musquez gr, 132.16 bbls 31.4-gr, 7/64-in, 840 lbs tp, 1025 lbs cp, gas/oil ratio 443/1, perf 5745-49 ft, td 5750 ft.

**Jim Wells County: Ben Bolt**—Bridwell's Hoffman 1-F, Trinidad gr, abnd 6010 ft.

**Jim Wells County: Seeligson**—Shell's Seeligson 7, W. Millican sur, 147 bbls 41-gr, 7/64-in, 1150 lbs tp, 1075 lbs cp, gas/oil ratio 810/1, perf 5935-45 ft, td 6008 ft.

Shell's Seeligson 8, W. Millican sur, 139.82 bbls 41-gr, 7/64-in, 1050 lbs tp, 1000 lbs cp, gas/oil ratio 810/1, perf 5933 ft, td 6053 ft.

**Nueces County: Agua Dulce**—Stanolind's Weinert 6, sec 1, 322.89 bbls 44.4-gr, ¼-in, 800 lbs tp, 1460 lbs cp, gas/oil ratio 1546/1, perf 6417-27 ft, td 6440 ft.

**San Patricio County: Odem** — Seaboard's Bomer 5, blk 4-A, 63.55 bbls 21-gr, ⅛-in, 370 lbs tp, 1025 lbs cp, gas/oil ratio 370/1, perf 5326-29 ft, td 5530 ft.

**Victoria County: Placedo**—Barnsdall's Lad Marek 1, blk 17, 92 bbls 31-gr, 8/64-in, 600 lbs tp, 1475 lbs cp, gas/oil ratio 310/1, perf 5536-40 ft, td 6883 ft.

### LOWER TEXAS COAST WILDCAT COMPLETIONS

**Aransas County: Failure**—Southern Minerals Corp.'s Mortgage Inv. Co. 1, sec 49, 6 mi ne Aransas Pass, abnd 7507 ft.

**Brooks County: Failure**—Sun's Villareal 1, Sh 4, 4½ mi w Rachal, abnd 7508 ft.

**Jackson County: New Sand Looney's Branch**—W. S. Boyle's A. B. Strovhal 1, Robertson sur, ½ mi southwest of field, 154.84 bbls 27.8-gr, ⅛-in, 1300 lbs tp, 1700 lbs cp, gas/oil ratio 1045/1, perf 5331-36 ft, td 5560 ft.

**Live Oak County: Failure**—Humphries & Hotchkin's Wade 2, Sommes sur, 3 mi ne Three Rivers, abnd 2376 ft.

**Nueces County: Failure**—Warren & Premont's Driscoll 1-A, blk 2, 3 mi ne Robstown, abnd 7086 ft.

### LOWER TEXAS COAST WILDCAT STARTS

**Jackson County**—Warren & Salt Dome's Zajicek 1, 640 ft e, 510 ft n line 40-ac tr, Sutherland sur, 2 mi s Ganado, 6500-ft test.

**Jim Wells County**—Hickok & Reynold's Reynolds & Richardson 1, 775 ft s'ly n, 3595 ft e line Stapes sur 210, 7 mi se Alice, 6200-ft test.

**Refugio County**—Gray & Wolfe's J. Hoffman 1, 1980 ft n and e lines sec 16, 7 mi se Woodsboro, 7000-ft test.

### SOUTH CENTRAL TEXAS WILDCAT COMPLETIONS

**Bastrop County: Failure**—Ogden & Riddle's Riddle 3-B, Blalock sur, 4 mi n Dale, Dale 1763 ft, Austin 1928 ft, abnd 1962 ft.

**Williamson County: Failure** — Herman Plath's Boortz & Freels 1, 5 mi se Thrall, abnd 1267 ft.

### SOUTH CENTRAL TEXAS WILDCAT STARTS

**Bastrop County**—Marts & Beaven's Wamel 1, J. Billingsly sur, 3 mi sw Cedar Crk, 1800-ft test.

**Milam County**—J. C. McKeehan's Bartek 1, 200 ft w, 150 ft s lines 87.5-ac tr, de la Pena gr, 3½ mi ne Buckholts, 1600-ft test.

J. C. Tittle's Simank & Schwarz 1, 990 ft due s of nw cor Schwarz tr, W. Norvey sur, 5 mi nw Thorndale, 1000-ft test.

## Texas Gulf Coast

### *Wilcox Sand Opened In Livingston Field*

Wilcox sand production opened at Livingston, Polk County; Atlantic extends production mile at Mercy, San Jacinto County; Shell continues to test Austin County Wilcox well.

**Polk County:** Jordan Drilling Co. has opened first Wilcox production in old Livingston field with a drill-stem test recovering 1600 ft 35-gravity oil in 14 minutes. Munson 1 drilled to 7047 ft after topping the producing sand at 7035 ft. The test was made at 7036-47 ft, using ¼-in choke top and bottom, showing 1450 pounds bottom-hole pressure. Operators are reaming hole to core deeper in sand.

Livingston produces from the Cockfield sand. It was discovered by Sunshine Oil Co. in 1930, and produced from 3286 ft. Later, Dick Schwab opened production at 4200 ft, thus establishing the best production in Cockfield. Successful completion of Jordan's well is expected to set off a new drilling campaign in the field, and also in other old fields that produce from the shallow formations. Jordan's test is the deepest a well has ever been drilled in the area.

**San Jacinto County:** Partial size of the recently discovered Mercy field was seen last week with Atlantic coring 18 ft saturated Wilcox sand in Palmer 1, mile northeast of Shell's discovery producer. Atlantic set pipe and is making production test. Sand was topped at 8283 ft and hole is bottomed at 8311 ft, the sand top being slightly lower than the Shell wells.

**Austin County:** Shell continues to make production tests on Hintz 1, Wilcox test northwest of Sealy, after making tests in perforations at 10,960-980 ft and 11,010-025 ft, all of which showed salt water, no oil or gas. Several other levels have been tested, and sand sections higher in hole will be tested.

### TEXAS GULF COAST FIELD COMPLETIONS

**Brazoria County: Chocolate Bayou**—Stanolind's Houston Farms 1, west extension, 1147 ft fr se & 550 ft fr nel 100-ac tr Hooper & Wade sur, perf 11,370-410 ft, flow 157 bbls 48.1-gr, ¼-in, gor 32,300-1, 5,098,000 gas, td 11,803 ft.

**Chambers County: Fig Ridge**—Sun's Pipkin 3, H&TC 96, perf 8492-8562 ft, flow 170 bbls 35.7-gr, ⅛-in, tp 1250, cp 1120, td 8570 ft.

**Fort Bend County: Blue Ridge**—R.L.P. Production Co.'s Gulf (Luscher) 5, 370 ft fr n & 1050 ft fr wl 50-ac tr, Thomas Habermacher sur, pump 21 bbls, 4092 ft.

**Harris County: Dyersdale**—Jack W. Frazier's Reichardt 1, 40-ac unit, Samuel Kelley sur, abnd 4153 ft.

**Jefferson County: Lovell's Lake**—Humble's Failor 4, 4782 ft se alg swl 662-ac lse C. Hillebrandt sur, abnd 7812 ft.

**San Jacinto County: Mercy**—Shell's Dunnam 2, ctr 40-ac unit out of sw cor 660-ac lse, J. R. Richardson sur, perf and flow 576 bbls 37-gr, ¼-in, tp 1100, cp 1400, gor 936-1, td 8288 ft.

**Wharton County: Withers**—F. W. Michaux's Pierce Est. 21, 2253 ft fr sel Charles Howard sur, perf and flowed 83 bbls 25.8-gr, 10/64-in, tp 175, cp 925, td 5402 ft.

F. W. Michaux's Pierce Est. 40, 4120 ft fr


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F. W. Michaux's Pierce Est. 62, 5987 ft fr sel Charles Howard sur, perf 5308-14 ft & 5316-21 ft, flow 181 bbls 26.5-gr, 10/64 in, tp 551, cp 525, td 5355 ft.

Texas Co.'s Pierce Est. 84, 1388 ft fr ne & 467 ft fr nwl 4041-ac lse, J. W. Caldwell sur, perf 5295-5312 ft, flow 64 bbls, ⅛-in, td 5384 ft.

Texas Co.'s Pierce Est. 107, 467 ft fr nwl 6000-ac lse, John Caldwell sur, perf 5337-57 ft, flow 117 bbls, ⅛-in, td 5384 ft.

**TEXAS GULF COAST WILDCAT COMPLETIONS**

**Matagorda County: New Gas Field**—Pure's LeTulle 1, Citrus Grove area, 640-ac unit, Erastus Yeamans sur 419, perf 4210-25 ft, flow 785,000 gas 7/64-in, td 4468 ft, opens gas field.

**TEXAS GULF COAST WILDCAT STARTS**

**Matagorda County**—Pure's Franzen 1, 1 mi w LeTulle 1 gas discovery, Erastus Yeamans sur, lcn 5000-ft test.

## Louisiana Gulf Coast

### *Wildcat on Tickfaw Prospect Still Testing*

Danciger attempting to open production on Tickfaw prospect, Livingston Parish; new sand section tested on southeast flank Starks Dome, Calcasieu Parish.

**Livingston Parish:** Danciger Oil and Refining Co. and William Helis are making second flow test on Danciger 1, wildcat on Tickfaw prospect that has indicated opening of new field. Drilled to around 10,300 ft, where electrical survey was run, operators perforated at 7264-70 ft, but recovered only water on drill-stem test. Second test is being made at 6644-47 ft in a sand section that indicated either oil or gas on log.

As a result of shows, the well has drawn considerable attention from leasing companies. The well was drilled on a block of approximately 4400 acres, but since sands were encountered operators have added to their holdings. The Texas Co., Sun, Cities Service, and United Gas own prospective acreage.

**Calcasieu Parish:** W. T. Burton is completing Industrial Lumber 6 in a new sand on southeast flank of Starks Dome. The sand section is believed to be the thickest yet found in any of the Starks wells, the section at 3850-3966 ft showing for production. Burton opened a new sand on the northwest flank in Lutcher-Moore 5 two weeks ago.

**St. Landry Parish:** Stanolind is making more production tests in Dohmann 1, wildcat northeast of Lewisburg discovery, is making more production tests in a sand at 9090-9105 ft. Last test at this level flowed 20 barrels distillate in 11 hours through 3/16-in choke with 3100 pounds pressure on tubing and 3200 pounds on casing.

**SOUTH LOUISIANA FIELD COMPLETIONS**

**Cameron Parish: Sweet Lake**—Pure's Miami Corp. 1, 2100 ft e, 660 s nw c s½ 7-13s-7w, southeast extension, abnd 9054 ft.

**Iberville Parish: Bayou Choctaw**—Solvay Process Co.'s Wilberts 7, 951 ft s, 200 e nwc 52-9s-11e, abnd 1951 ft.

**Iberville Parish: Bayou des Glaise**—Humble's Schwing 1, 1720 ft s nwc 86 alg w l, thence 1838 ft e at ra ln 85-8s-8e, sidetracked two times, abnd 6332 ft.

**Iberville Parish: Whitecastle**—Shell's Wilberts Sons 25, 8-11s-12e, perf 5890-98 ft, flow 147 bbls, tp 725, cp 825, gor 340/1, td 5945 ft.

**Jefferson Parish: Barataria**—California Co.'s Little Village 1, Unit 110, 2-16s-23e, abnd 10,999 ft.

**LaFourche Parish: Chacahoula** — Sun's Cypress 6, 2515 ft w & 620 ft s of nec 75-15s-15e, perf 7790-7825 ft, flow 137 bbls 34.7-gr, ⅛-in, gor 568/1, td 8325 ft.

**LaFourche Parish: Delta Farms**—California Co.'s Louisiana Delta Farms 4, begin nw cor 6-17s-23e, go s 1 deg 00 mins e 395 ft, thence 880 ft e to lcn in 6-17s-23e, perf 9010-50 ft, flow 318 bbls, 5/32-in, tp 1525, gor 625/1, td 11,328 ft.

**Plaquemines Parish: Garden Island**—Texas Co.'s State-Garden Island 56, 6634 ft s & 3748 ft w of USCGS Mon. "Minnesota," n 61 deg w 660 ft fr State 54 in 108-23s-23e, perf, flow 195 bbls, 5/32-in, tp 850, td 7255 ft.

**St. Charles Parish: Lake Salvador**—Texas Co.'s State-Lake Salvador 14, n 16 deg 05 min e 13,738 ft fr USCGS "Cat" in lake T-16s-22e, perf 9720-25 ft, flow 476 bbls, 3/16-in, tp 1625, td 10,255 ft.

**St. Charles Parish: Paradis**—Texas Co.'s Sunset Realty 4, 3085 ft s & 2054 ft e se 5-14s-20e in 39-14s-20e, perf 10,110-29 ft, flow 501 bbls, 10/64-in, tp 1850, td 10,490 ft.

**St. Mary Parish: Charenton** — George Frankos' Hine 1, 1156 ft n, 950 e swc 27-13s-10e, sands 5570-95 ft & 5906-65 ft, perf 5914-26 ft, flow 165 bbls, ¼-in, tp 925 ft, td 6008 ft.

**Terrebonne Parish: Gibson**—Union Producing Co.'s Pelican 1, 1321 ft w, 1320 n sec 3-17s-15e, perf 10,303-20 ft & 10,331-42 ft, flowed 4,840,000 gas, ¼-in, tp 4200, td 10,405 ft.

**Vermilion Parish: Abbeville** — Continental's Seller 1, 720 ft e 605 s nwc 20-20s-3e, abnd 10,119 ft.

**Jefferson Davis Parish: North Roanoke**—Union Sulphur's Pearl 1, 652 ft n, 330 e swc 7-9s-3w, abnd 9641 ft.

**SOUTH LOUISIANA WILDCAT COMPLETION**

**Vernon Parish**—Shell's Long Leaf 1, Hornbeck area, sec ne sw 15-4n-9w, abnd 9641 ft.

**SOUTH LOUISIANA WILDCAT STARTS**

**Orleans Parish**—W. T. Burton's State-Lake Ponchartrain 8-318, 7150 ft w, 1730 s Pointe aux Herbes lighthouse in Lake Pontchartrain, South Point area, T-10s-13e, company rig, lcn.

**St. Mary Parish**—Danciger's Adeline Sugar Factory 1, North Franklin area, 330 ft s, 1663 e nwc 54-14s-9e, company rig, lcn.

## North Louisiana

### *Shreveport Outpost Show Draws Another Location*

Four good wells at Haynesville. Offset staked to Shreveport field outpost, which is reported to have pay. Smackover lime wildcat at Bellevue, Bossier Parish, begins.

**Natchitoches Parish:** George Echols' tight wildcat, Goodpine 1, which caused some interest with reported shows of gas and oil, has been temporarily abandoned at 5520 ft, after showing salt water.

**Caddo Parish:** Bering Oil Co.'s Noel 1, section 25-18-14, Shreveport field outpost, was reported to have 12 ft of Pettit lime pay zone, leading to staking of Bering's Noel 2.

**Bossier Parish:** Carrying the revived Shreveport field play into adjoining Bossier Parish, W. C. Leisk staked Free State 1, 19-18-13. At Bellevue, Phillips Petroleum Co. set surface casing at 631 ft on a deep Smackover lime wildcat, which will explore for deeper structure underlying the old shallow field.

**NORTH LOUISIANA COMPLETIONS**

**Claiborne Parish: Haynesville**—Mid-States Oil Corp.'s Aiken 1, 26-23-8, flow 720 bbls, 20/64-in, cp 625, tp 350, acidized 5000 gals, perf 5442-72, 360 shots, td 5575 ft.

Ohio's S. T. Hunt Acct. 3-P No. 3, 9-23-8, flow 1176 bbls, ¼-in, cp 540, tp 500, acidized 4000 gals, perf 5360-76 ft and 5420-29 ft, td 5480 ft.

Ohio's Waller Unit P-1, 14-23-8, flow 1004 bbls, ¼-in, cp 650, tp 500, acidized 5000 gals, perf 5226-52 and 5274-80 ft, td 5360 ft.

Ohio's Garrett 5-P No. 1, 23-23-8, flow 33 bbls first hour, ¼-in.

**LaSalle Parish: Nebo**—H. L. Hunt's Goodpine F-111, 198 bbls 18/64-in.

**Caddo Parish: Pine Island**—Bayou State Oil Co. Brown A-2, pump 13 bbls.

J. E. Marshall T. S. Spell A-5, pump 25 bbls.

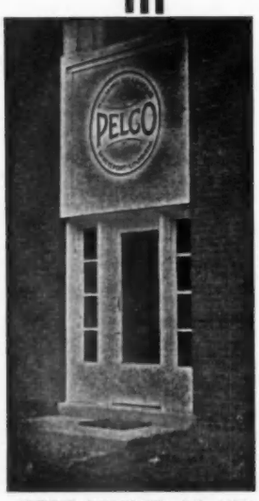
Transport Oil Co. Crystal 8, pump 10 bbls.

**Caddo Parish: Vivian**—A. Paul Gilbert, Thigpen-Herold 1, pump 27 bbls.

**Natchitoches Parish**—George Echols Goodpine 1, 13-13-8, pipe set to 5520 ft, showed salt water on first test, plugged back, information withheld, temporarily abandoned.


**Another Thing We Don't Like About War**

Resentments breed like rabbits at a time like this. Maybe you explain to an old customer that you can't get this or that. He finds it around the corner in abundance. Maybe you have what he wants, but he lacks the necessary preference rating. He gets it from a bootlegger—an opportunist who looks legitimate, pious and enterprising. All of which makes you out a liar or something. In two minutes you lose caste, confidence and favor it has taken 34 years to acquire. You'd almost welcome Little Itchy Itchy and his Kara-Kiri stuff. And then you remember it's what the bastards want you to do. So you grin and carry on.

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**NORTH LOUISIANA WILDCAT STARTS**

**Caddo Parish: Vivian-Hosston Area**—H. C. Owens' Wilkinson 1, 660 ft s, 660 w nec 34-23n-15w.

**Bossier Parish: Bellevue**—Phillips Petroleum Co.'s Kendrick 1, 22-19-11, set 16-in 631 ft.

**Caddo Parish**—Caibon Oil Co.'s Horne 1, 16-16-15, moving in.

**Caddo Parish: Shreveport**—Bering Oil Co.'s Noel 2, 505 ft s, 80 e nwc se ne 25-18-14, lcn.

**Bossier Parish**—W. C. Leisk's Free State 1, 19-18-13, lcn.

## Arkansas

### New Distillate Sand Opened at Macedonia

Gas reserves at Macedonia increased by opening of new distillate horizon in Cotton Valley series.

**Columbia County:** McAlester Fuel Oil Co. and Atlantic Refining Co. completed Nipper No. 1, 20-18-20, flowing 212 bbls of 63-gr distillate on 12/64-in choke, with gas-oil ratio of 10,000-to-1. Casing was perforated in Cotton Valley sand at 8050 ft. Operators killed the well to make dual completion from Smackover lime, first such operation for the field.

**ARKANSAS FIELD COMPLETIONS**

**Lafayette County: Midway**—Barnsdall Oil Co.'s Roberts 4, 11-15-24, porosity 6334 ft, td 6469 ft, flowing, no gauge.

Barnsdall Oil Co.'s Roberts 5, 11-15-24, porosity 6375 ft, td 6470 ft, flowing, no gauge.

**Columbia County: Dorcheat**—Robert Stacy's Barton 1, 11-18-22, flowing, no gauge.

**MISSISSIPPI COMPLETIONS**

**Adams County**—Harry W. Elliott and Gilger Drilling Co.'s Ogden 1, 36-6n-2w, Vicksburg 2093, Jackson 2150, Cockfield 2583, Sparta 3232, Wilcox 4408, Midway 7270, abnd 7533 ft.

**Pearl River County**—Placid Oil Co.'s Southern Mineral 3, se sw 9-2s-16w, abnd 5843 ft.

**Yazoo County: Tinsley**—E. C. Johnston's Martin 15, nec se sw 1-9n-3w, pump 250 bbls, td 5015 ft, perf 4950 to 5015, Wilcox 2140, Midway 4125, Selma 4940, Woodruff 5009 ft, perf 4950 ft, td 5015 ft.

**MISSISSIPPI WILDCAT STARTS**

**Issaquena County**—Pres Cochrane's Anderson-Tulley 1, nec nw sw 17-17n-3e, lcn.

**Lincoln County**—Freeport Sulphur Co.'s Clark 1, sw 15-6n-9e, moving in.

## California

**CALIFORNIA FIELD COMPLETIONS**

**Fresno County: Coalinga Old Field**—Standard's No. 102-35A, ne 35-19-15, pump 63 bbls 22.4-gr, 224 ft perf 3030 ft, td 3126 ft.

Texas Co.'s Pleasant Valley Farming B-A-1, 6-20-15, pump 47 bbls 11-gr, 66 ft perf 1476 ft, td 1478 ft.

**Fresno County: Raisin City**—Seaboard's STU 86-13, se 13-15-17, flowing, no estimate, perf 5106-5095, 5008-4997 ft, td 5320 ft.

**Kern County: Belridge**—Belridge Oil Co.s 31-R-28, 2240 ft s, 909 w ne cor 28-27-20, flow 140 bbls 30-gr, 82 ft perf 8794 ft, td 8794 ft.

General's Belridge 40, 699 ft s, 233 e nw cor 3-29-21, pump 65 bbls 14-gr, perf 510-696, 743-765, 788-858, 874-940 ft, td 951 ft.

**Kern County: South Belridge**—Union's Hopkins 41-10, 330 ft s, 330 w n¼ cor 10-29-21, flow 53 bbls 14.4-gr, 2 in, 135 ft perf 1198 ft, td 2298 ft.

**Kern County: Midway**—General's Moco 35-356, 1279 ft n, 1398 e s¼ cor 35-12-24, pump 36 bbls 13.6-gr, 428 ft perf 1064 ft, td 1065 ft.

**Orange County: Huntington Beach**—Southwest Explo. Co.'s State 51, 186 ft nly 3216 ft wly C/Ls 23rd & Ocean, flow 237 bbls 24.5-gr, 778 ft perf 4965 ft, td 4968 ft.

**Ventura County: Eureka Canyon**—L. H. Phillips and D. H. Nichols No. 1, 300 ft n, 4400 e nw cor Union Oil Co. Fee Property, Sec. 33-4-18, pump 14 bbls 27-gr, 2-in, 215 ft, td 225 ft.

**CALIFORNIA WILDCAT COMPLETION**

**Sonoma County Failure: Petaluma Area**—Standard's Petaluma Comm. 2-1, 3013 ft nly on C/L Adobe Rd. from C/Ls Hardin Lane and Corona Rd; thence 2287 ft nely at R/A, abnd 1648 ft.

## Rocky Mountain Area

### Locations Made for Deep Tests at Pilot Butte

Two new locations and a tentative location are spotted for the new deep sand discovery in the old Pilot Butte field, Wyoming. General Petroleum Corp. plans drilling Horse Creek, Wyoming, wildcat. Amerada takes shooting option on North Dakota block.

**Pilot Butte:** Superior Oil Co. is building derrick for Stock 1, CSE NE NE 21-3n-1w. Superior as operator, joint with British American Oil Producing Co. spotted Tribal 2, CSE NW SW 15-3n-1w, ¼ mile north discovery, and British American tentatively located Tribal 1, CSE NW NW 22-3n-1w, ½ mile south of discovery. Each separately has 1000 acres under lease, and jointly 5000 acres. Joint discovery pumped 750 bbls of 24.7 gravity oil through 250 perforations in 7-in opposite Tensleep at 6184-6325 ft three weeks ago.

**Horse Creek:** Thirty-five miles northwest of Cheyenne, General Petroleum Corp. is unitizing 6500-acr block to drill to around 5000 ft. Rotary will be moved from company's Antelope Gap test, Wheatland County, which is expected to complete within next 30 days.

**Moorcroft Test:** Second test to start in as many weeks in old Moorcroft area northeastern corner of Wyoming, Lanam Oil Co.'s Government 1, NW NW NE 17-53n-63w, cable, is drilling at 260 ft.

**North Dakota Blocks:** Amerada Pe-


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troleum Corp. has taken geophysical option on 168,000 acres from Thos. W. Leach of Bismark.

**MONTANA FIELD COMPLETIONS**

**Glacier County: Cut Bank**—Glacier Production Co.'s Corrigeux 6, cnw se 28-33n-5w, 72 bbls flowing, Lower Cut Bank 3057-71 ft, td 3072 ft, elv 3990 ft.

Glacier's Bonnett 11, cne se 33-33n-5w, flowing 80 bbls, Lower Cut Bank 2945-54 ft, td 2954, elv 3880 ft.

**Toole County: Kevin-Sunburst**—Big West Oil Co.'s Vial 2, csw se 31-35n-4w, 7.6 ft gas, Cut Bank sand 2130-45, pb from td 2334 ft, Ellis-Madison contact so 2310-15 ft, acidized 500 gals failed to respond.

Imperial Craig Oil Co.'s Martin 7, csw sw 17-35n-1w, flow 15 bbls, 1644 ft.

Nepstad, Montgomery & Vanderpass's Helgerson 9, sw se se 28-35n-1w, flow 25 bbls, 1468 ft, 1000 gals acid.

Prevol & Shay's Waite 11, se ne ne 24-35n-2w, flow 25 bbls, 1525 ft.

**WYOMING FIELD COMPLETIONS**

**Niobrara County: Lance Creek**—Continental's 4 Rodeo 1 (for Buck Creek Oil Co. account), sw sw se 27-36n-65w, td 4129 ft, gas input well for Basal Sundance sand.

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**CARL J. HOCHENAUER,** president of Texoma Supply Company, Tulsa, has been elected executive vice president of Driscoll Construction Company of Pueblo, Colorado. Hochenauer, who has been chairman of the board of Driscoll since 1937, has just assumed active management of the company's operations.


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# Michigan

## New and Deeper Sand Found at Headquarters

Sun's State A2, N½ NW SW 33-21n-3w, Headquarters field, Roscommon County, flowed 92 bbls. net first 24 hrs. after 1000-gallon acid treatment in new Monroe horizon at 4970 ft. Well had dropped back to 41 bbls. on sixth day of production and company indicated it may be drilled deeper for test purposes. Well is producing now at record depth in Michigan for oil. It is located on west flank of pool which heretofore had produced only between 3300-3500 ft from Traverse and probably will lead to additional deep drilling.

**Wildcats:** Changed plans to drill deeper for a Monroe test instead of plugging again have been revised to test an oil zone in the Dundee lime between 2769 and 3056 ft. This zone was not logged when initially drilled but showed as high as 45 bailers of oil in 8 hrs. after reaming. Operators now plan to clean out and acidize.

**Riverside:** Still without a final completion gloom continued to mount in the new Riverside area, Missaukee County, with two offsets to the discovery shut down with only shows of oil and water in the objective horizon. Both wells were structurally low and a third offset also was low on upper beds. Pure's Whittet 1, N½ NW SW 14-21n-7w, diagonal southwest offset to discovery, logged Dundee at 3969 ft. and shut down at 3978 ft. after coring a water sand. Gulf's direct south offset logged Dundee at 3948 ft. and shut down with a show of oil and water.

**MICHIGAN FIELD COMPLETIONS**

**Allegan County: Allegan**—Bridger Basin's Butcher 1, nw ne nw 26-2n-13w, pump 5 bbls, Traverse 1410 ft.

**Allegan County: Hopkins**—Regal Dutch Pet. Co.'s Wamhoff 3, e½ nw ne 18-3n-12w, pumped and flow 97 bbls, Traverse 1557 ft.

**Allegan County: Trowbridge**—Claude Huff's Theiner 2, sw sw ne 21-1n-13w, pump 15 bbls, Traverse 1367 ft.

**Clare County: Winterfield**—Pure's Van Deussen 1, c se ne 1-19n-6w, flow 214 bbls 10 hrs, Monroe 3997 ft.

**Lake County: Reed City**—Ohio's Campbell 1, s½ sw se 18n-11w, pump 81 bbls, Traverse 2976 ft.

**Lake County: Sauble**—C. W. Teater's Walker 1, ne ne nw 16-19n-14w, Traverse, abnd 2190 ft.

**Ottawa County: Grand Rapids (Walker-Tallmadge**—John C. Newell's Bronkema 1, e½ sw sw 14-7n-13w, flow 50 bbls, Traverse 1875 ft.

**MICHIGAN WILDCAT COMPLETIONS**

**Allegan County: Failure**—H. C. Williams' Afman 1, se se ne 30-3n-11w, Traverse 1928 ft, abnd 1958 ft.

**Clare County: Failure**—Freeman Oil Co.'s Liewald 1, sw sw ne 16-18n-5w, Dundee 4017 ft, abnd 4026 ft.

**Roscommon County: Headquarters New Sand**—Pure's State C1, s½ se nw 33-21n-3w, flow 186 bbls 2 hrs, Traverse 3415 ft.

**Saginaw County: Failure**—Miller Bros. Co.'s Sutliff 1, se se se 10-9n-1e, Traverse 2457 ft, Dundee 2880 ft, abnd 2920 ft.

# Eastern States

**NEW YORK COMPLETIONS**

**Allegany County**—Bradley Prod. Corp., Nobles Farm, Alma, 5 bbls, Richburg, 1265 ft.

Ebenezer Oil Co., Herrick farm, Alma, 8 bbls, Richburg, 1342 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, 7 bbls, Richburg, 1342 ft.

Buehring, Harris & McEnroe, Allen farm, Scio, 9 bbls, Richburg, 1166 ft.

Richardson Pet. Corp., Norton farm, Scio, 9 bbls, Richburg, 1230 ft.

Hardy & McBride, Garthwaite farm, Alma, 10 bbls, Richburg, 1334 ft.

Bradley Prod. Corp., Fitz-Carroll farm, Bolivar, 9 bbls, 1377 ft.

Olin Barnes et al, Willing, 5 bbls, Costello farm, Fords Brook, 1049 ft.

South Hill Oil Co., Harrington farm, Wellsville, 7 bbls, Fords Brook 1354 ft.

McDougall Oil Co., Fee farm, Clarksville, 5 bbls, Richburg, 1322 ft.

Sloan & Zook, Green Farm, Genesee, 9 bbls, Richburg, 1370 ft.

**NEW YORK INTAKE WELLS**

**Allegany County**—South Bolivar Oil Co., McKelvey farm, Bolivar, Richburg, 1279 ft.

Conklin & Reeland, Swarthout farm, Wirt, Richburg, 1329 ft.

Pure Penn Oil Co., Gowdy farm, Bolivar, Richburg, 1371 ft.

Max Andrews, Burdick farm, Wirt, Richburg, 1382 ft.

New York Oil Co., Brown farm, Bolivar, Waugh-Porter, 1430 ft.

Sawnett Oil Co., Merritt farm, Genesee, Richburg, 1439 ft.

L. H. Thornton et al, Fassett farm, Willing, Fords Brook, 1287 ft.

**OHIO COMPLETIONS**

**Ashland County**—Williams et al's Koppler 1, 0.17 gas, 2651 ft.

**Athens County**—C. J. Ross et al's Sapp 1, 3 bbls, 404 ft.

**Gallia County**—D. T. Orndoff's Nelson 1, 0.03 gas, 1709 ft.

**Holmes County**—Ohio Fuel's Mitten 1, 0.14 gas, 3507 ft.

**Knox County**—Ross Riggs' Dugan 1, abnd 2972 ft.

**Licking County**—Hope Co.'s Hamilton 1, 25 bbls, 3085 ft.

**Medina County**—Ohio Fuel's Fulton 2, abnd 3293 ft.

Harry W. Patterson's Garver 3H, 5 bbls, 380 ft.

J. S. Swann's Clark 3, 45 bbls, 440 ft.

**Meigs County**—F. Utsinger's Nelson 3, abnd 850 ft.

**Monroe County**—Spangler & McCost's Stephens 1, 0.05 gas, 1800 ft.

**Morgan County**—Ohio Fuel's Snyder 2, 0.45 gas, 4277 ft.

**Muskingum County**—Ohio Fuel Gas' Young 1, 1.0 gas, 4244 ft.

**Noble County**—S. E. Ruby's Rung 1, 0.5 gas, 733 ft.

**Perry County**—Hermey Bros.' Hermey 26, 7 bbls, 1105 ft.

Pure's Williams 4, 0.1 gas & 150 bbls, 3260 ft.

**Washington County**—Anderson et al's Flannery 3, 0.05 gas, 1560 ft.

R. W. Porter's Male 1, abnd 1345 ft.

H. W. Porter's Moore 1, 0.1 gas, 1322 ft.

**OHIO INPUT WELLS**

**Medina County**—J. S. Swann's Clark 2, 410 ft.

J. S. Swann's Clark 3, 387 ft.

**PENNSYLVANIA COMPLETIONS**

**Armstrong County**—Apollo Gas Co.'s Mansfield 1, 0.13 gas, 3062 ft.

**Fayette County**—Blaho & Tedrow's Coke 1, 0.03 gas, 2044 ft.

**Greene County**—Mfgrs. Lt. & Heat Co.'s Orndoff 1, 0.74 gas, 3034 ft.

Mfgrs. Lt. & Heat Co.'s Smith 3, 0.6 gas, 3378 ft.

**Washington County**—John Johnson et al's Dunbar 1, abnd 2170 ft.

Freshwater & Co.'s Kosthe 1, 0.04 gas, 1180 ft.

**PENNSYLVANIA WELLS DRILLED DEEPER**

**Armstrong County**—Equitable's Warner 1396, 0.11 gas, otd 2538, td 3142 ft.

**Greene County**—William Bungard et al's Frazee 1, 0.05 gas, 1617 ft.

**WEST VIRGINIA COMPLETIONS**

**Boone County**—South Penn's Yawkey-Freeman 66, 0.06 gas, 2047 ft.

**Calhoun County**—Hope Natural's Louis Bennett 8606, 1.21 gas, 1772 ft.

**Gilmer County**—H. B. Scott et al's Messenger 1, 20 bbls, 1521 ft.

**Jackson County**—United Fuel Gas Co.'s Parsons 5075, 4.41 gas, 5012 ft.

United Carbon Co.'s Cabot 931, 9.62 gas, 5187 ft.

Columbian Carbon Co.'s Slawter 1, 3.34 gas, 5183 ft.

United Fuel Gas Co.'s O'Dell 5088, 1126 gas, 5193 ft.

**Lincoln County**—So. Penn Nat. Gas Co., Stephenson et al 4, 3 bbls, 2532 ft.

**Putnam County**—Easter Gas Co.'s Easter 1, 0.08 gas, 2340 ft.

**Ritchie County**—E. C. Hartman's Parks 2, abnd 2180 ft.

**Taylor County**—Pitts. & W. Va. Gas Co.'s Taylor 6128, 0.23 gas, 1454 ft.

**Wetzel County**—Hope Natural Gas Co.'s Barr 10, abnd 2417 ft.

**WEST VIRGINIA WELLS DRILLED DEEPER**

**Putnam County**—Buff Creek Gas Co.'s A. M. Pullens 1, 0.1 gas, otd 1739 ft, td 2343 ft.

# Men in the Industry's News

**O. Q. LOMAX** has been elected vice president and general superintendent of Humble Pipe Line Company, succeeding J. A. Neath, who resigned to become a director of Humble Oil & Refining Company. The directors announced other changes, effective June 1.

O. Q. LOMAX

H. M. STEVENSON

H. M. Stevenson, formerly chief engineer, has been made chief engineer and assistant to general superintendent at Houston.

F. D. McMahon, formerly division superintendent at Longview, has been transferred to Houston and made assistant general superintendent.

G. A. Lee, formerly assistant division superintendent in West Texas, has been transferred to Longview and made division superintendent of East Texas.

Jack Jones, formerly district superintendent at Odessa of the West Texas division, has been transferred to Midland as assistant division superintendent of the West Texas and Panhandle division.

A. J. Muller, formerly district superintendent at Pampa of the Panhandle area, has been transferred to Odessa and made district superintendent at Odessa, West Texas area.

H. V. McCorkle, formerly division warehouseman and relief district superintendent in West Texas, has been transferred to Pampa, as district superintendent.

**HAROLD M. McCLURE** of Alma was reelected chairman of the Michigan Oil Advisory Board at the last meeting and W. P. Clarke, Gulf Refining Company, Saginaw, was reelected vice chairman. McClure has served as chairman of the board since it was created in 1939.

**GLENN S. DILLE** was elected president of the Tulsa Geological Society last week. Other new officers are Maurice Teis, Ohio Oil Company, first vice president; Myron C. Keiss, The Pure Oil Company, second vice president; Louis Desjardins, Seismograph Service Corporation, secretary-treasurer; Constance Leatherock, Tide Water Associated Oil Company, editor. Elected to the Society Council were J. L. Ferguson, Amerada Petroleum Corporation; N. W. Bass, United States Geological Survey; Harold Enlows, University of Tulsa and Jess Vernon, Amerada Petroleum Corporation.

**J. A. BOONE,** petroleum engineer of Coryell County, has joined the engineering staff of the Texas Railroad Commission at Houston. J. E. DuBose of Dawson County has joined the statistical staff of the commission, District 3.

**REESE S. ALLEN,** of Electra, veteran North Texas operator and operator of the first refinery in Texas Panhandle, has cancelled the unpaid balance of a student loan advanced to an Army Air Corps lieutenant that participated in the bombing of Tokyo. Allen has given financial aid to more than 700 college students, and offers to make additional cancellations under such circumstances.

**HARVEY WHITAKER,** geologist with Gorman & Yoakam Drilling Company in San Antonio for the past three years, has resigned to enter the consulting field. The prior four years he was geologist for Bridwell Oil Company.

**JOE GREER** has been appointed acting deputy supervisor of the Texas Railroad Commission, Oil and Gas Division, District 3, with headquarters at Houston. Greer succeeds Vaile Henry who resigned June 1 to join the Army Air Corps. He has been with the commission 10 years, having joined at Kilgore in 1933. He was transferred to Houston in 1939, and served in the statistical department.

**G. E. BURGHER,** president of Bur-Kan Petroleum Company, has established offices in Mattoon, Illinois.

**EDWARD FITZWILLIAMS** is superintendent in charge of the new office of Harvey Sims, drilling contractor, at Salem, Illinois.

**JOE KELLY BUTLER,** former engineer with The Texas Company and superintendent of the Conroe district, and Ernie Cockrell, Jr., also former engineer with The Texas Company, have organized Oil Production Maintenance, Inc., with offices in Esperson Building, Houston. The company engages in workover-well servicing and also conducts consulting engineering work.

**LEE CONNOR** of The Texas Company and J. A. Gavin of Shell Oil Company, Houston, have been appointed members of the executive committee of the industrial section, Texas Safety Association. William Grant, Jr., Humble Oil and Refining Company, Houston, is chairman of the section. Brig. Gen. Walter B. Pyron, formerly of Gulf Oil Corporation and now on active duty in Washington, is president of the association.

**H. D. DICKSON,** West Texas division civil engineer for Humble Oil & Refining Company, has been transferred from Midland to Houston headquarters.

**WILLIAM C. JOHNSON,** sales manager of the crushing and cement division, has been named manager of the Allis-Chalmers Manufacturing Company's general sales organization. He will direct the sales of 1600 different products and the operations of 60 district offices.

Johnson joined the Allis-Chalmers


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elimination and prevention of boiler scale and corrosion, economically and safely, while the boilers operate, by the use of SAND-BANUM.

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organization in January, 1924. He became an expert on new crushing equipment then in the process of development and was sent all over the country to service the equipment. In 1929 he was made the representative of the crushing and cement division at Atlanta. In 1935 he went to Chattanooga, in a general sales capacity, and two years later he opened up a company district office at Knoxville, Tennessee. In March, 1940, he returned to Milwaukee as sales manager for the crushing and cement division.

**L. D. MURRAY,** former district manager of the Texas Gulf Coast division of American Iron and Machine Works Company, has been appointed special sales representative with headquarters in Dallas. In addition to being district manager for the past two years, Murray was formerly sales manager of the Gulf Coast area.

**A. N. GRIFFITH,** Baroid Sales Division, has been made superintendent of the company's well logging service in West Texas and New Mexico.

**PAUL D. TORREY** presented a paper on "A Review of Secondary-Recovery Methods in the United States" before the Houston Geological Society June 4.

**H. R. CULLEN** was elected president of the board of directors of the Houston Symphony Society last week. Other officers include T. E. Swigart, president Shell Pipe Line Company, chairman of board; Ray L. Dudley, president Gulf Publishing Company, H. C. Wiess, president Humble Oil & Refining Company, and John E. Green, Jr., general attorney Gulf Oil Corporation, vice presidents.

**T. F. BIRMINGHAM,** president of Margay Oil Corporation, has been elected chairman of the board of directors; M. B. Spears, who has been executive vice president, succeeds to the presidency, while J. I. Taylor, former secretary-treasurer becomes executive vice president. E. D. Oldenburg was elected secretary-treasurer.

**WILLIAM SUMNER BENSON,** 78, retired vice president and treasurer of Tide Water Oil Company, died at his home in Passaic, New Jersey, on May 31 following several years of poor health. He retired from the company in 1925. Benson was the son of Byron David Benson, a founder of Tide Water Pipe Company, which operated a pipe line carrying oil from Pennsylvania to the Atlantic Coast and which later became Tide Water Oil Company.

**JAMES CLARENCE DENTON,** 60, vice president and general counsel Mid-Continent Petroleum Corporation, Tulsa, died June 4 at Tulsa. He joined the staff of Cosden & Company, forerunner of Mid-Continent Petroleum Corporation in 1916, and had been general counsel since 1921, becoming vice persident in 1925.

**OSCAR H. TRUE,** 64, department head of United Gas Utility Company and father of L. H. True of Dallas, assistant manager of Magnolia Pipe Line Company, died May 28 at Shreveport, where he had resided a number of years.

**WILLIAM C. McGLOTHLIN,** 47, consulting geologist and operator, died June 1 at Corsicana, where he had resided since 1922, serving as zone geologist for Gulf Oil Corporation until 1930. He was a star football player with Oklahoma University; graduating in 1918. The greater portion of his geological activities dealt with the Woodbine Basin in East Texas, where he shared in several discoveries.

# Squeaks from the Bull Wheel

### Fooled Himself

"Gosh, what a head I've got. I can't go to the office today."

He reached for the phone and called his boss' private number. "It's no use wrapping things up," he confessed. "Last night I was out with some pals, and I'm ashamed to say it, I overdid it. I wonder if I could take the day off today, sir?"

"I admire your candor, and I shall expect you at nine tomorrow. As for the day off, it's yours. Today is Sunday."

### Diplomacy

There are a lot of ways to stop a train, admits the *M.-K.-T. Magazine* Senator Tom Connally has his own technique, as illustrated by his recent telegram to the Katy Line:

"Am on B. & O., which is late. Imperative that I catch Texas Special for important speaking engagement at Dallas tomorrow; otherwise shall miss engagement with nationwide hook-up. Please hold your train until B. & O. limps into St. Louis.

"Am lifelong patron of Katy railroad. First train I ever saw was Katy. My mother sold butter and eggs and milk to workers on railroad as it was being built from Waco south when I was a little boy. Hope it can serve her boy in his old age. Urgently request that you hold train. Thanks. Tom Connally, U. S. Senator."

The Texas Special was held.

### First Aid

A young matron of our acquaintance, taking First Aid training, has reached the Resuscitation Stage. One evening recently, returning from a Red Cross meeting, she observed a man, on a darkened side street, sprawled face downward.

"Aha," thought the matron, "Providence has sent me hither to minister to this poor unfortunate." Parking her car nearby, she rushed over and began giving the treatment for resuscitation.

Presently the man stirred, looked up, and spoke with great difficulty:

"Lady," he said, "I don't know what you're up to, but I wish you'd quit tickling me. I'm holding a lantern for a guy workin' down in this manhole."

### Aboard Transport

"How often does a big ship like this get sunk?"

"Only once, soldier."

### One Track

"Sir, I wish to marry your daughter."

"Do you drink, young man?"

"Thanks, but let's get this other matter straightened out first."

### Scientific Answer

Name three states in which water may exist.

Maine, New Hampshire and Vermont.

### Not Far Wrong

"Why do we have two houses of Congress?"

"The representatives make the laws and senators talk them over."

### Gals Talking

"What's a military objective?"

"Just walk past those soldiers. You'll find out."

You may have surplus used equipment that is urgently needed by some other operator.

**TRADING POST SECTION**

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**POWER SPECIALTY CO.**
25 NORTH LIVE OAK ★ HOUSTON, TEXAS

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***One Year Guarantee***

Your favorite supply store will be happy to send in your old Gauges, Weight Indicators, Flowmeters, Etc.

# Notes for the Equipment Buyer and User

## Casing Pump Anchor

**BYRON JACKSON COMPANY**

Byron Jackson Company, Los Angeles, has announced a new casing pump anchor, a new device for safely anchoring pumps and for prompt release when it is necessary to remove them from the well.

The large-area slips have diagonal-cut teeth, and the hazard of damage to the casing is minimized. The body is welded to the tubing nipple which is free to move through the anchor cage a sufficient distance to set the slips when the following easy method is used:

Casing pumps usually are run in the well on the sucker rods, with the BJ casing pump anchor coupled to the lower end of the pump. The anchor cage is equipped with friction shoes which contact the casing, and when the desired depth has been reached the rod string is raised until the key on the nipple comes out of the pocket in the anchor cage. Rotation to the right brings this key over its keyway and then by lowering the string the anchor holds the actuator and slips and the body expands the slips and sets them against the casing.

## Valves

**EVERLASTING VALVE COMPANY**

Everlasting Valve Company, 49 Fisk Street, Jersey City, New Jersey, has issued a 32-page bulletin describing quick-operating valves for blow-off, water columns and other boiler-room services. The bulletin is illustrated with views which show the design and construction of various types.

The text is topically arranged for quick reference. Complete tables of specifications, dimensions and prices are included.

## Drill Press Vice

**PATTERSON-BALLAGH CORPORATION**

Patterson-Ballagh Corporation, 1900 East 65th Street, Los Angeles, California, has announced a simple inexpensive and practical all steel drill press vice to meet all shop conditions. In all 3 working positions it lies flat on the face plate, and square thread operates against a bronze thrust bushing. The use of two guide bars permits the operator to drill completely through the work without injury to the vice, thereby speeds up production. Admirably adapted to small assembly work and to hold small pieces for machinery, filing, etc., during bench operations. Made in two sizes, that illustrated is 5½-inch opening with ears to fasten to face plate. Made also with 3-inch opening, without

Patterson-Ballagh Drill Press Vice

ears, otherwise the same sturdy construction.

## Cement Dump

**SHULL PERFORATING COMPANY**

Shull Perforating Company, 2750 Cherry Avenue, Long Beach, California, has announced a new cement dump with several novel features.

The ground seat-and-ball dump valve provides positive closure as the dump is lowered into the well. Pressure in the well increases the tightness of the seat and prevents dilution and cement losses.

An automatic tripping mechanism opens the dump valve by upward movement of the sand line. This puts the dump under control of the operator at all times and permits the placing of cement or chemical exactly where it is wanted, without dilution or loss, according to the manufacturer.

Jerks on the line due to faulty spooling can not trip the dump release. With the tripping release operated from above rather than by hitting bottom, much time is saved on cement jobs, as repeated trips can be made without having to wait for hardening. This device, named the Dempsey cement dump, is machined from alloy steel to resist strains resulting from high-speed operation. Sizes range from 1½- to 4½-inch.

## Glass Coating

**WILBUR & WILLIAMS COMPANY**

Wilbur & Williams Company, Boston, Massachusetts, has announced development of a transparent material for application on glass to prevent shattering.

This new material comes in liquid form, ready for use. It can be applied by spraying or brushing. For home use, the handy-man can obtain excellent results with an ordinary flit-gun; professionals will of course use regular spray equipment.

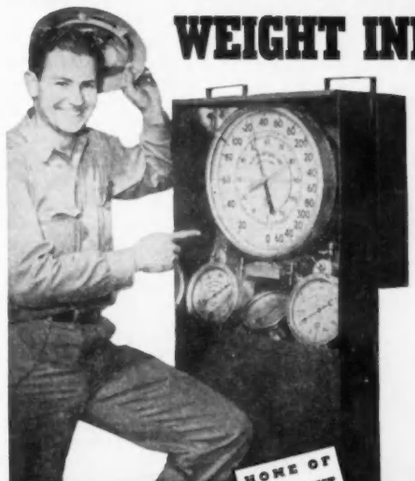
This unique coating passes sunlight with very little absorption, and therefore weathers very well without discoloration. It dries quickly, forming a strong, tough film having a tensile strength of from 3000 to 5000 pounds per square inch. Elongation is over 20 percent, permitting considerable movement of the glass without rupture of the film.

The actual melting-point is over 200° C., and excellent protection is given at temperatures up to 212° F. Only very slight discoloration will be found after prolonged exposure. While not intended for long service on the exterior, where exposed to weather, this shatter-resistant coating should be very useful in any period of active bombing; and, on the interior, should give protection for an indefinite period.

## Industrial Rubber Conservation Sponsored by U. S. Rubber Book

A 48-page illustrated book on conservation of rubber products in industry has been published by United States Rubber Company, Rockefeller Center, New York. All rubber products now in use by industry are essential to war


WEIGHT INDICATOR POINTS



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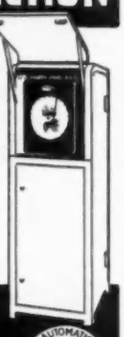

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production and will become increasingly difficult if not impossible to replace.

Complete and explicit suggestions are given for the proper care of these important rubber products from initial design through inventory and storage to use, maintenance, inspection and repair.

The book, "First Aid to Industry in Conserving Rubber," is completely indexed and all mechanical rubber goods are included, such as, hose of all types; transmission, conveyor and elevator belts; mechanical packings; electrical tapes, wires and cables; molded and extruded rubber goods; rubber lined equipment; rubber mountings, mats and matting; printing materials, and rubber bonded grinding wheels.

Copies of the book are being mailed immediately to more than 50,000 engineers, plant managers, superintendents and others responsible for production and maintenance in American industries in all parts of the country, and other copies will be available on request.

### Foundry Machine

DeWalt Products Corporation, Lancaster, Pennsylvania, has issued a booklet covering the new high speed DeWalt metal cut-off saw, together with a sheet of specifications covering its new foundry machine.

### Pumping Control

The Foxboro Company, Foxboro, Massachusetts, has issued a bulletin describing Rotax electric-operated control as employed in pumping applications. Rotax controllers of the recording and indicating type are shown, together with specimen chart records and installation photos. The text is largely devoted to water-works and sewage engineering but also covers pumping applications which are common in various industrial fields.

### Forged Products

Lenape Hydraulic Pressing and Forging Company, West Chester, Pennsylvania, has issued catalog 842 giving complete engineering data on Lenape "Red Man" welding necks, nozzles, elliptical handholes and manholes, and forged specialties.

### Hot Weather Needs

A four-page pamphlet has just been distributed by the E. D. Bullard Company describing the benefits of certain hot weather needs for workers, such as salt tablets, cellulose sponge sweat pads, Venex snake bite treatment and poison oak and ivy treatments. Copies are available by asking for the folder, "Hot Weather Needs That Aid Working Efficiency." E. D. Bullard Company, 275 Eighth Street, San Francisco, California.

### Lock Nuts

Laminated Shim Company, 86 Union Street, Glenbrook, Connecticut, has issued a folder on An-cor-lox lock nuts.

The An-cor-lox lock nut itself is self-contained, with all-metal construction, and is devised both for extreme locking security, and speed and ease in applying. Besides being re-usable, An-cor-lox locking power increases with repeated re-use. An-cor-lox lock nuts are offered in a full range of sizes and metallic alloys to meet virtually all service conditions of atmosphere, temperature, endurance, vibration and shock.

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*See the new feature . . . .*

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Because of the scarcity of certain types of new equipment and the fact that some concerns may have a surplus of certain items and a serious shortage of others, this **"Used Equipment Forum"** has been inaugurated as a service and aid to operators in locating needed used equipment or in disposing of surpluses that may be needed by others.